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MT LEGISLATIVE HISTORY

Chapter 698 1983

Bill H 540 S _____ Original bill & hist. ✓ C

H. Committee on Judiciary		S. Committee on Judiciary	
Hearing Date(s) _____	C	Hearing Date(s) _____	C
2/10	✓ C	3/23	✓ C
4/5	✓ C	_____	C
_____	C	_____	C
Date Out 2/17	✓ C	3/24	✓ C

Did this bill originate in an interim committee? ___ Yes ✓ No

Committee _____ Report _____

STATUS SHEET

JUDICIARY COMMITTEE

48 Legislature

ll No.	Subject Matter	Date In	Sponsor	Hearing Date	Committee Action	Date Out
537	Providing there may be no deferral of imposition of sentence or suspension of execution of an imposed sentence for certain major crimes.	1/27/83	Rep. Jones	2/7/83	Table	2/9/83
540 ✓	Revising geographical application of laws prohibiting driving under the influence of alcohol or drugs; making it offense to drive with blood alcohol concentration more .10.	1/27/83	Rep. Vincent	2/10/83 Rereferred ~~5/4/83~~ 4/5/83	Do Pass As Amended Senate Amendments Be Not Concurred In	2/17/83 ~~5/4/83~~ 4/5/83
546	Provide for granting of parole by the Board of Pardons if the population at prison or the women's center exceeds design capacity for more than 30 days	1/28/83	Rep. Waldron	2/7/83	Do Pass As Amended	2/8/83
555	Providing assistance to state and local agencies for the furtherance and improvement of local law enforcement, courts criminal prosecution and defense	1/28/83	Rep. Quilici	2/7/83	Do Not Pass As Amended	2/9/83
562	Amending definition of the crime of incest to include any sexual contact w/o consent and to extend the definition to include stepson/daughter not adopted by offender.	1/29/83	Rep. Harper	2/10/83	Do Pass As Amended	2/10/83
575	To provide a lien for medical practitioners and hospitals against payments awarded by the Workers' Comp. Div. for medical services	1/29/83	Rep. Winslow	2/10/83	Do Pass As Amended	2/12/83

rm CS-32

HOUSE BILL NO. 540

INTRODUCED BY VINCENT, WINSLOW, KEMMIS, BERGENE, ADDY

IN THE HOUSE

January 27, 1983	Introduced and referred to Committee on Judiciary.
February 1, 1983	On motion by Chief Sponsor, Representative Addy was added as a sponsor to the bill.
February 18, 1983	Committee recommend bill do pass as amended. Report adopted.
February 19, 1983	Bill printed and placed on members' desks.
February 21, 1983	Second reading, do pass as amended.
February 23, 1983	Correctly engrossed.
	Third reading, passed. Transmitted to Senate.

IN THE SENATE

March 1, 1983	Introduced and referred to Committee on Judiciary.
March 25, 1983	Committee recommend bill be concurred in as amended. Report adopted.
March 26, 1983	On motion rules suspended to consider HB 540 on second and third reading next Legislative Day.
March 28, 1983	Second reading, concurred in as amended.
	Third reading, concurred in. Ayes, 45; Noes, 2.

IN THE HOUSE

March 28, 1983	Returned to House with amendments.
April 1, 1983	Second reading, pass consideration.
	On motion, Senate amendments taken from second reading and referred to Committee on Judiciary.
April 6, 1983	Committee recommend Senate amendments not be concurred in.
April 7, 1983	Second reading, amendments not concurred in.
April 8, 1983	On motion, Free Conference Committee requested and appointed.
April 20, 1983	Free Conference Committee reported.
	Second reading, report adopted.
	Third reading, report adopted.
April 21, 1983	Free Conference Committee report adopted by Senate.
	Sent to enrolling.
	Reported correctly enrolled.

INTRODUCED BY House BILL NO. 540
Vincent Winslow Kennis Bergene

A BILL FOR AN ACT ENTITLED: "AN ACT REVISING AND EXTENDING THE GEOGRAPHICAL APPLICATION OF THE LAWS PROHIBITING DRIVING UNDER THE INFLUENCE OF ALCOHOL OR DRUGS; MAKING IT AN OFFENSE TO DRIVE A MOTOR VEHICLE WITH A BLOOD ALCOHOL CONCENTRATION OF MORE THAN .10; PROVIDING FOR THE ADMISSIBILITY OF EVIDENCE; AMENDING SECTIONS 61-8-101 AND 61-8-401 THROUGH 61-8-404, MCA; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Section 61-8-101, MCA, is amended to read:

"61-8-101. Application -- exceptions. (1) The provisions of this chapter relating to the operation of vehicles refer exclusively to the operation of vehicles upon highways except:

(a) where a different place is specifically referred to in a given section;

(b) the provisions of 61-8-301 and 61-8-401, with regard to operating a vehicle while under the influence of alcohol or drugs, shall apply ~~upon--highways--and--elsewhere throughout~~ anywhere within the state.

(2) The operation of motor vehicles directly across the public roads and highways of this state, especially as required in the transportation of natural resource products, including agricultural products and livestock, shall not be considered to be the operation of such vehicles on the public roads and highways of this state provided that such crossings are adequately marked with warning signs or devices. Such crossings are subject to provisions relating to stopping before entry and to restoration of any damage as may reasonably be prescribed by the state or local agency in control of safety of operation of the public highway involved."

Section 2. Section 61-8-401, MCA, is amended to read:

"61-8-401. Persons under the influence of alcohol or drugs. (1) It is unlawful and punishable as provided in 61-8-714(1) for any person ~~who-is~~ to drive or be in actual physical control of a motor vehicle anywhere within this state while the alcohol concentration in his blood, breath, or urine is .10 or more.

(2) It is unlawful and punishable as provided in 61-8-714(1) for any person to drive or be in actual physical control of a motor vehicle anywhere within this state while under the influence of:

(a) alcohol ~~to-drive-or-be-in-actual-physical-control-of-a-motor-vehicle-upon-the-highways-of-this-state~~;

(b) a narcotic drug ~~to-drive-or-be-in-actual--physical~~

~~control of a motor vehicle within this state~~ or

~~(c)~~ any other drug to a degree ~~which~~ that renders him incapable of safely driving a motor vehicle ~~to drive or be in actual physical control of a motor vehicle within this state~~; or

(c) alcohol and any drug to a degree that renders him incapable of safely driving a motor vehicle.

~~(2)~~(3) The fact that any person charged with a violation of subsection (1) or (2) is or has been entitled to use alcohol or such a drug under the laws of this state does not constitute a defense against any charge of violating subsection (1) or (2).

~~(3)~~(4) ~~In any criminal prosecution for a violation of subsection (1) of this section relating to driving a vehicle while under the influence of alcohol, the amount~~ Upon the trial of any civil or criminal action or proceeding arising out of acts alleged to have been committed by any person driving or in actual physical control of a vehicle while under the influence of alcohol, the concentration of alcohol in the ~~defendant's~~ person's blood, urine, or breath at the time alleged, as shown by ~~chemical~~ analysis of the ~~defendant's~~ person's blood, urine, breath, or other bodily substance, shall give rise to the following presumptions:

(a) If there was at that time an alcohol concentration of 0.05% or less ~~by weight of alcohol in the defendant's blood~~, it shall be presumed that the ~~defendant~~ person was not under the influence of alcohol.

(b) If there was at that time an alcohol concentration in excess of 0.05% but less than 0.10% ~~by weight of alcohol in the defendant's blood~~, that fact shall not give rise to any presumption that the ~~defendant~~ person was or was not under the influence of alcohol but such fact may be considered with other competent evidence in determining the guilt or innocence of the ~~defendant~~ person.

(c) If there was at that time an alcohol concentration of 0.10% or more ~~by weight of alcohol in the defendant's blood~~, it shall be presumed that the ~~defendant~~ person was under the influence of alcohol.

(5) The provisions of subsection (4) do not limit the introduction of any other competent evidence bearing upon the issue of whether the person was under the influence of alcohol.

~~(4) Percent by weight of alcohol in the blood shall be based upon grams of alcohol per 100 cubic centimeters of blood.~~

(6) For purposes of this section, "alcohol concentration" means either grams of alcohol per hundred milliliters of blood, grams of alcohol per 210 liters of breath, or grams of alcohol per 75.3 milliliters of urine.

(7) A charge or citation for driving under the

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influence of alcohol or drugs includes any offense included in this section.

~~(5)~~(8) Each municipality in this state is given authority to enact 61-8-714 and subsections (1) through ~~(4)~~ (6) of this section, with the word "state" in ~~subsection~~ subsections (1) and (2) of this section changed to read "municipality", as an ordinance and is given jurisdiction of the enforcement of the ordinance and of the imposition of the fines and penalties therein provided."

Section 3. Section 61-8-402, MCA, is amended to read:

"61-8-402. Chemical blood, breath, or urine tests. (1) Any person who operates a motor vehicle ~~upon--the--public highways--of~~ anywhere within this state shall be deemed to have given consent, subject to the provisions of 61-8-401, to a chemical test of his blood, breath, or urine for the purpose of determining the alcoholic content of his blood if arrested by a peace officer for driving or in actual physical control of a motor vehicle while under the influence of alcohol. The test shall be administered at the direction of a peace officer having reasonable grounds to believe the person to have been driving or in actual physical control of a motor vehicle ~~upon-the-public-highways of~~ anywhere within this state while under the influence of alcohol. The arresting officer may designate which one of the aforesaid tests shall be administered.

(2) Any person who is unconscious or who is otherwise in a condition rendering him incapable of refusal shall be deemed not to have withdrawn the consent provided by subsection (1) of this section.

(3) If a person under arrest refuses upon the request of a peace officer to submit to a chemical test designated by the arresting officer as provided in subsection (1) of this section, none shall be given, but the division, upon the receipt of a sworn report of the peace officer that he had reasonable grounds to believe the arrested person had been driving or was in actual physical control of a motor vehicle ~~upon--the--public--highways-of~~ anywhere within this state while under the influence of alcohol and that the person had refused to submit to the test upon the request of the peace officer, shall suspend the license or driving privilege of such person ~~on-the-highways-of~~ anywhere within this state for a period of 60 days. Like refusal by a nonresident shall be subject to suspension by the division in like manner. All such suspensions are subject to review as hereinafter provided."

Section 4. Section 61-8-403, MCA, is amended to read:

"61-8-403. Right of appeal to court. The division shall immediately notify any person whose license or privilege to drive has been suspended, as hereinbefore authorized, in writing and such person shall have the right

to file a petition within 30 days thereafter for a hearing in the matter in the district court in the county wherein such person shall reside. Such court is hereby vested with jurisdiction and it shall be its duty to set the matter for hearing upon ~~30~~ 10 days' written notice to the county attorney of the county wherein the appeal is filed and such county attorney shall represent the state, and thereupon the court shall take testimony and examine into the facts of the case, except that the issues shall be limited to whether a peace officer had reasonable grounds to believe the person had been driving or was in actual physical control of a vehicle ~~upon the public highways~~ anywhere within this state while under the influence of alcohol, whether the person was placed under arrest, and whether such person refused to submit to the test. The court shall thereupon determine whether the petitioner is entitled to a license or is subject to suspension as heretofore provided."

Section 5. Section 61-8-404, MCA, is amended to read:

"61-8-404. Evidence admissible -- conditions of admissibility. (1) Upon the trial of any criminal action or other proceeding arising out of acts alleged to have been committed by any person while driving or in actual physical control of a motor vehicle while under the influence of alcohol, and notwithstanding any other rule or statute pertaining to the admissibility of evidence:

(a) evidence of the amount of alcohol in the person's blood at the time of the act alleged as shown by a chemical analysis of his blood, breath, or urine is admissible; and

(b) a report of the facts and results of any chemical test of a person's blood, breath, or urine administered under 61-8-402 is admissible in evidence if:

(i) the report was prepared and verified by the person who performed the test;

(ii) the test was on a blood sample and the person withdrawing the blood was competent to do so under 61-8-405(1) and verified in writing on the report that he withdrew the sample;

(iii) the test was a laboratory analysis and the analysis was done in a laboratory operated by the department of justice or by any other laboratory or facility certified or exempt from certification under the rules of the department; and

(iv) the report was prepared in accordance with any applicable rules of the department.

(2) Unless the accused or his attorney notifies the prosecuting attorney at least 10 days before the trial or hearing of his intention to call the person who performed the chemical test or prepared the report of the facts and results of the test as a witness, the accused waives any right to request that the person who performed the test

testify in person at trial.

~~(2)~~(3) If the person under arrest refused to submit to the test as hereinabove provided, proof of refusal shall be admissible in any criminal action or proceeding arising out of acts alleged to have been committed while the person was driving or in actual physical control of a motor vehicle upon the public highways while under the influence of alcohol.

~~(3)~~(4) The provisions of this part do not limit the introduction of any other competent evidence bearing on the question of whether the person was under the influence of alcohol."

NEW SECTION. Section 6. Severability. If a part of this act is invalid, all valid parts that are severable from the invalid part remain in effect. If a part of this act is invalid in one or more of its applications, the part remains in effect in all valid applications that are severable from the invalid applications.

NEW SECTION. Section 7. Effective date. This act is effective on passage and approval.

-End-

MINUTES OF THE JUDICIARY COMMITTEE
February 10, 1983

The meeting of the House Judiciary Committee was called to order by Chairman Dave Brown at 8:05 a.m. in room 224A of the capitol building, Helena, Montana. All members were present as was Brenda Desmond, Staff Attorney for the Legislative Council.

HOUSE BILL 577

REPRESENTATIVE McBRIDE, District 85, Silver Bow County, stated that under current law, anyone who applies to the Montana Bar is charged an application fee of $25.00; in addition, the law says the petition for the examination is also $25.00; as far as she understands, the supreme court sets the bar fee, which is considerably above the $25.00. She explained that what this bill does is to remove the statutory $25.00 for the admission and for the bar exam and replaces it by saying that the fee for application of admission to the bar will be commensurate with the cost of processing the application as determined by the supreme court.

J. C. WEINGARTNER, representing the State Bar of Montana, feels that this bill is fair and they support it.

MIKE ABLEY, Court Administrator for the Supreme Court of Montana, said that they support either the Senate version or the House version of this bill.

There were no further proponents and no opponents.

REPRESENTATIVE McBRIDE stated that the class of 1984 will be the first class to take the bar exam so she felt that it was important that they straighten it out and make it clear as to how much it will cost.

There were no questions and the hearing on this bill was closed.

HOUSE BILL 540

REPRESENTATIVE VINCENT, District 78, Bozeman, stated that this was part of a packet of bills that addresses

a very serious problem of driving under the influence in the state of Montana; this bill is commonly referred to as the per se bill because of the presumption that it applies to a chemical test that indicates that someone has an alcohol content of .10 or greater; and this bill would create two dui charges - the traditional one that we have now would be retained, but a second dui charge would be placed on the books. He indicated that the difference is relatively simple - in a traditional dui charge they are generally talking about a behavioral test and in the per se dui, they are essentially talking about a charge that is chemically based; and that is that once you hit that level, .10, you are presumed to be intoxicated; and the consensus is that you need both.

STEVE JOHNSON, Assistant Attorney General, gave testimony in support of this bill. See EXHIBIT A.

DORIS FISHER, representing Montanan's Against Drunk Drivers, gave a statement in support of this bill. See EXHIBIT B.

JIM NUGENT, City Attorney for the City of Missoula, spoke in support of this bill. See EXHIBIT C.

BILL WARE, representing the Montana Chiefs' of Police Association, stated that he would like to go on record in support of this bill.

FRANCES ALVES, Director of the Missoula County Drunk Driver Prevention Program at the Missoula City-County Health Department, offered testimony in support of this bill. See EXHIBIT D.

COLONEL BOB LANDON, Chief Administrator of the Highway Patrol Division, Department of Justice, stated that they need this bill because they are killing Montanans at a very high rate and next to cancer and heart disease, as far as adults are concerned, drunk drivers kill more people on our highways than any other source; we have a major problem; and if it were a disease such as one of the dread diseases, we would be up in arms about it. He requested that the committee pass this bill.

MIKE WOOD, representing the Missoula County Task Force on Drunk Driving, said that he was representing Betty Wing, Deputy County Attorney from Missoula County, and he offered prepared testimony in her behalf. See EXHIBIT E.

MARC RACICOT, Prosecutor Coordinator for the County Prosecutor Services of the Department of Justice, advised the committee that the county attorneys would like to go on record in support of this legislation.

CATHY CAMPBELL, representing the Montana Associaton of Churches, offered testimony in support of this bill. See EXHIBIT F.

There were no further proponents and no opponents.

REPRESENTATIVE VINCENT closed.

CHAIRMAN BROWN asked if the rebuttable presumption that is used here has been tested since the Sandstrom case. MR. JOHNSON responded that to his knowledge it has not been ruled on by the courts in Montana, but he thought that it is probably ripe for a challenge.

CHAIRMAN BROWN asked how does the recent Shea case impact this. He replied that he thinks it might impact it even more than the Sandstrom case; and he would refer this to Jim Nugent, who is much more knowledgable about it having prosecuted the case. MR. NUGENT advised that the Shea case has a ruling in it that says if a presumption has the effect of shifting the burden of persuasion, it is unconstitutional; if it has the effect of shifting the burden of persuasion to the defendant, then he thought it was a presumption of innocence and, therefore, unconstitutional. He felt there was every reason to be concerned as to how the court might rule on dui presumption as result of the Shea case; and he felt that it was going to be imperative to take that type of case to the court sometime soon to find out just what the effect is on the dui laws.

REPRESENTATIVE ADDY noted that it seems that in both of those cases you are presuming intent from action; that you are presuming the answer to the ultimate question from some preliminary facts; and here .10 of the blood alcohol level is the offense; and he wondered if there was a distinction there. MR. JOHNSON replied that the presumption, as he sees it, applies only to the traditional dui and it collaborates the chemical data with the degree of impairment to be proved in the traditional dui. He thought that the presumption does have an effect in helping the prosecution establish it, but it doesn't do it totally, because there is other evidence that can be put before the jury to determine whether a person was intoxicated or not under the traditional dui statute.

REPRESENTATIVE ADDY said that this was particularly troublesome to him because to the extent that this concern about presumption is justified; and what they are talking about in an illegal per se, is per se unconstitutional. MR. JOHNSON answered that under the illegal per se law, you don't have to worry about the presumption at all; presumption has absolutely no relevance in per se; and the only two elements you have to establish under illegal per se, is (1) that the person is driving or in actual physical control of the motor vehicle, and (2) that he had a blood alcohol concentration of .10 or greater. He stated that there is no presumption that enters in there.

MR. NUGENT commented that it was important to recogonize that you can't write a law so you have absolute liability in traffic and parking, as pointed out in the Shea case; the whole thing turns around the language of the law you are going to rely on; and his concern about presumption was in the existing state of the law, whether they are going to be able to stretch that presumption.

REPRESENTATIVE ADDY asked if he could furnish him copies of the task force material and the material on the Sandstrom and Shea cases; and he doesn't see where there is a problem here.

REPRESENTATIVE KEYSER commented that years ago in Montana law, the enforcement people could make an arrest on dwi basically anywhere - even going on to private property and he asked if it was a supreme court decision or was it a legislative decision to back off from that particular language. MR. JOHNSON responded that as he understands it, it was purely legislative and he was not aware of any court decision.

REPRESENTATIVE EUDAILY indicated that he thought there was a problem some time back between private property and anywhere in the state. MR. NUGENT responded that he has thoroughly researched this; they use to be able to prosecute for anywhere in the state and after the 1979 law change, the cases pretty well said that anywhere in the state withstands constitutional attack. He said that he was not aware of any cases that limited that in any respect; as he understands what happened in the 1979 legislature, this was in a big lengthy bill; and the first the Missoula law enforcement people knew about it was when they went to Bozeman and the officer from Glasgow called it to their attention after the legislature had adjourned already.

MR. JOHNSON explained that other states have the legal per se and dui statutes and he is not aware of any problems that those states have had. He noted that our criminal and penal statutes generally apply in private as well as public property.

CHAIRMAN BROWN noted that on page 2, lines 20 and 21 it says "or be in actual physical control of a motor vehicle" and if an individual walks out of a bar, gets into his car, realizes he is too drunk to drive home and goes to sleep, would he be arrested for a dui. MR. JOHNSON replied that they haven't had any direct instruction of that language in the cases in Montana that he is aware of, but in other states, people have been arrested for sitting behind a wheel of a car, not moving it but if they have the keys in the ignition. He is not exactly sure how the Montana courts would rule in a situation where a person is passed out simply inside of a car.

COLONEL LANDON explained from a practical point the only time a person can be arrested for being in actual physical control of a motor vehicle is if the key was on, the engine was running and he was in a position where he could do harm to someone, such as behind a wheel right in the middle of a highway or stopped at a traffic light or in a position where he had the potential to do harm.

REPRESENTATIVE ADDY noted that when you get into scientific tests, you have to be able to show a number of elements; one is that the person who administers the test was qualified and he understood the scientific principles upon which the test was based; the scientific principles are generally accepted as valid and the test was administered in a proper manner. He felt that when a test is questioned, the court has to answer all three of those questions.

MR. JOHNSON indicated that there are rules governing who can adminster these tests; the Division of Forensic Sciences has set up a certification program under which devices and technicians are certified to use a particular machine to perform a particular task, but blood tests are only withdrawn by medical personnel.

CHAIRMAN BROWN asked if this bill would make it a blood test. MR. JOHNSON responded that this bill does not change the types of authorized tests.

REPRESENTATIVE ADDY noted that they didn't stiffen the penalty for refusing to take a breath test; and he wondered why they didn't. REPRESENTATIVE VINCENT replied that that is in a separate piece of legislation.

REPRESENTATIVE ADDY asked if he would have any objection to them amending the bill to include a six-month suspension if they refuse. He thought that if they get tougher on people who have .10 in their blood stream, there is going to be a greater disincentive for them to take the test or they can say, "Go ahead and suspend my license for sixty days, I don't care."

REPRESENTATIVE VINCENT indicated that that was in a separate piece of legislation that has been introduced and he would just leave it up to the best judgment of the committee.

REPRESENTATIVE ADDY declared that he would hate to see them do one thing and not the other. REPRESENTATIVE VINCENT replied that the intent is to do both.

There were no further questions and the hearing on this bill was closed.

HOUSE BILL 618

REPRESENTATIVE KEYSER, District 81, Ennis, stated that this bill changes the name of the Montana Malpractice Act to the Montana Legal Panel Act and the guts of the bill is on page 3, wherein it says, "The amount of the assessment must be annually set by the director, who shall allocate a projected cost among physicians, hospitals and other health care facilities." He advised that this act originally had one of the most extensive hearings he has ever heard in a House committee; this act has really been working well; this is one of the things that they have done through the years that has really worked well and it has really cut down on the number of malpractice cases.

GERALD NEELY, an attorney for the Montana Medical Association and also the legal counsel for the Montana Malpractice Panel, presented to the committee an explanation of some proposed amendments. See EXHIBIT G. He explained that the Montana Malpractice Panel sits in review of all claims against designated health care providers; the panel is composed of three physicians and three lawyers; and it is required that a claim go before one of these panels before it can proceed into court. He indicated that if either party does not like the decision, the people before the panel can still go on into court; and after six years of operation of the panel, the number of lawsuits in Montana with respect to malpractice claims has decreased over 70 per cent; and the number of trials has decreased over 88 per cent.

Exhibit A
HB 540
Feb. 10, 1983

TESTIMONY OF: STEVE JOHNSON
Assistant Attorney General

RE: HOUSE BILL 540

The Attorney General strongly supports HB 540. If enacted, it would increase the certainty and ease of securing DUI convictions, increase the frequency of guilty pleas, and, in the long run, decrease the cost in terms of time and money of DUI prosecution. Those results have been attained in other states which have enacted similar laws.

HB 540 make two significant additions to our existing DUI statues. (1) First, it adds in section 2 a wholly new offense by making it unlawful to drive while having an alcohol concentration of 0.10 or more. "Alcohol concentration"[1/] is a defined term under the bill and refers to the weight in grams of alcohol found in either 100 milliliters of blood or 210 liters of breath or 75.3 milliliters of urine.

1/ This definition of alcohol concentration was developed in the early '70s by the National Safety Council. It was then adopted by the State of Minnesota in its DUI laws and has been incorporated into the model DUI statutes proposed in the 1979 revision to the Uniform Vehicle Code upon which HB 540 was based.

(2) Second, HB 540 makes laboratory reports showing the amount of blood present in a sample of a defendant's blood, breath or urine to be directly admissible into evidence at trial. Currently, the state incurs considerable expense in sending crime lab technicians to DUI trials in every corner of the state to testify on the amount of alcohol that they have determined to be present in a defendant's blood at the time of arrest. Present law declares lab reports to be a form of inadmissible hearsay.[2/] HB 540 makes lab reports admissible into evidence but at the same time sets strict requirements of verification of signatures and certification of laboratories performing chemical analysis in order to assure the authenticity and reliability of those reports. The net effect will be to reduce the travel time of crime lab technicians and let them devote more time to the technical job they were hired to perform.

Section 5 of the bill also requires any defendant to give ten days notice to the prosecuting attorney of an intention to call the lab technician as a witness. If the defendant does not do so, he waives any and all right to call the technician as a witness. The notice

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2/ See Rule 803(8)(i), Montana Rules of Evidence (M.R. Evid.). However, under Rule 802, M.R.Evid., the legislature may enact statutory exceptions to the rules of evidence established by the Montana Supreme Court.

provision allows crime lab personnel to budget their time more effectively and reduces the ability of a defendant to harrass the state by making untimely requests for lab personnel to appear at trial.

The new offense which HB 540 proposes to add to Montana's DUI laws is generally referred to as an illegal per se (IPS) law. This new offense would constructively supplement--not unnecessarily duplicate --our existing DUI statute. The new offense is proposed subsection (1) to section 61-8-401, MCA, under section 2 of HB 540. Traditional DUI is proposed subsection (2) to section 61-8-401. To be guilty of traditional DUI under existing law, more must be shown than the level of alcohol in one's blood while driving: It must be shown that the driver is "intoxicated," i.e., physically or physiologically impaired to an extent that his or her senses and reactions are not functioning reliably. In other words, traditional DUI is a behavior-based offense. Evidence of chemical test results showing alcohol concentration is relevant only if those results can be correlated to physiological impairment. To establish that correlation is the function of the presumptions under section (2) of the bill on pages 3 and 4.

On the other hand, the new IPS offense proposed by the bill is not based on behavior. It is a chemically-based offense. The only elements

constituting the offense are driving and a prohibited alcohol concentration as measured by means of a chemical test of the defendant's blood, breath, or urine. Evidence of behavioral impairment under an IPS statute is unnecessary and irrelevant. Accordingly, the statutory presumptions of intoxication do not apply to an IPS charge.

As of August of 1981, fifteen states had IPS statutes. More have undoubtedly been enacted since that time. They have consistently received strong support in both the lower and the appellate courts when challenged on constitutional grounds. In no case has an IPS statute ever been ruled unconstitutional on any theory.

According to a 1981 survey conducted by the National Highway Traffic Safety Administration (NHTSA), other jurisdictions have reported an increase in the frequency and number of guilty pleas to DUI following enactment of IPS statutes because those statutes are much harder to defend against than traditional DUI. If the chemical test is properly administered and shows a prohibited alcohol concentration, the defendant's only defense consists of attacking the procedural legality of his arrest or the scientific reliability of established chemical testing procedures or devices. Prosecutors have reported speedier resolution of cases and fewer trials as the result of the stronger plea bargaining

position they enjoy under IPS statutes whenever lab reports indicate a high alcohol concentration.

As a final note I would recommend a slight amendment in the presumption language of page 4 of the bill relating to a presumption of intoxication in the case of defendants with an alcohol concentration of 0.10 or greater. Under section 2 of the bill, proposed subsection (4)(c) to section 61-8-401, MCA, reads: "If there was at that time an alcohol concentration of 0.10 or more...it shall be presumed that the...person was under the influence of alcohol."

My suggested amendments are two-fold: first, specify as explained above, that the statutory presumptions under proposed subsection (4)(c) to section 61-8-401, MCA, relate only to charges under proposed subsection (2) to section 61-8-401, MCA, i.e., only to charges of traditional DUI. Second, the language of proposed subsection (4)(c) to section 61-8-401 on page 4 of the bill should explicitly state that the presumption of intoxication there provided for is a rebuttable and not a conclusive presumption. If proposed subsection (4)(c) is interpreted by the courts to be a conclusive presumption which the jury must make, the presumption is of questionable constitutionality. In Sandstrom v. Montana, 442 U.S. 510 (1979), the United States Supreme court held that a statutory presumption that could be read as a conclusive presumption of a material element

of a charged offense was unconstitutional because it "would 'conflict with the overriding presumption of innocence with which the law endows the accused...'" and would relieve the state of proving every fact necessary to constitute the crime beyond a reasonable doubt. Id. 442 U.S. at 523. The presumption of proposed subsection (4)(c) could be ruled unconstitutional under Sandstrom unless it is made clear that presumption is rebuttable by the defendant.

EXHIBIT D
HB 540
2/10/83

HB 540 ILLEGAL PER SE

It's time to say it out loud: "DRINKING AND DRIVING IS AGAINST THE LAW!" Driving Drunk should be a criminal offense. We have all seen road tests and alcohol studies enough to prove the fact that :Nobody can drive safely when the BA is .1. Nobody has the coordination and ability for quick response, which driving demands, when the BA is .1. You can't learn how, get used to being .1 or grow older and get smart enough to drive safely when the BA is .1. This is a chemical problem involving body functions. We are talking about physiological effects which have nothing to do with basic intelligence, physical fitness nor performance. Therefore, it is time that we accept scientific facts and make it as easy as possible for the people to understand that : IT IS AGAINST THE LAW. Confront this head on! It is dangerous, stupid, expensive, irresponsible, deadly, painful but ....IT IS AGAINST THE LAW IS A BIG STATEMENT. The public is losing the war against drunk drivers----26,000 a year. We have researched it, task forced it, dissected it , philosophied about it and now it is time to use all of these statistics, studies, graphs which our scientists provide us and "Call a Spade a Spade!"

Sure, we may have all done it--are still doing it--or we have friends and family who participate in the sport, but, we are all able to listen and learn. There were people who thought that the earth was flat until it was proven otherwise. After this happened, the people who were still going around pretending that the earth was flat, looked a little silly!!! Now, there is a lot of work to do to educate the public that their behavior must change. We can do that in two ways--Preventative Educational Programs which cost $ and confronting the problem which cost your vote! Here you have both tools. If our proposed legislation passes, our state will qualify for $200,000 in Federal money for education and prevention programs in Montana. I am here to tell you that you can make a lot of pamphlets, TV spots, billboards, bumper stickers and educational projects with $200,000. I know, I have been doing it on a lot less. Our MADD group functions like Sam Levinsen said: "With Everything But Money". In the last four years the interest in this subject has been growing in Montana and we now have more people in this state with the training to use that $ towards a big statement to our people. Look what technology and scientific facts and a program has done to the acceptance of smoking. Just light up in front of any child and then get ready to listen to a little confrontation regarding your health and his. Our kids need alcohol educational programs so that they can grow up and then deal with this social habit with responsibility.

Your responsibility here as legislators is to confront the problem by taking a strong stand, confront the problem and make a big statement to the public. At the same time we will get our law enforcement officers out of the courtroom and back on the street--or out there working the night shift instead of waiting outside of the courtroom all day for his turn to be put on trial. This is a ridiculous waste of man power and tax money to be paying our policemen to testify regarding the preformance of a traffic offender.

The courts and jury will have to argue with a machine. It is not okay to drink and drive in the state of Montana anymore! Say it out Loud!!!

DORIS FISHER for MADD
MONTANAN"S AGAINST DRUNK DRIVING

Exhibit C
HB 540
2/10/83

TO: House Judiciary Committee Members

FROM: Jim Nugent, Missoula City Attorney

RE: HB-540 Extending the geographical application of driving under the influence of alcohol and making it an offense to drive a motor vehicle with a blood alcohol concentration of more than .10

DATE: February 9, 1983

House Judiciary Committee Members:

I would like to take this opportunity to strongly urge your support for the enactment of House Bill 540 pertaining to extending the geographical application of the laws prohibiting driving under the influence of alcohol and making it an offense to drive a motor vehicle with a blood alcohol concentration of more than .10. I have prosecuted driving under the influence (DUI) of alcohol and drug offenses for the City of Missoula since June of 1975.

I would like to focus your attention on the portion of HB-540 that would allow prosecution of DUI offenders "anywhere within this state." The language "anywhere within this state" is language that is commonly found in DUI statutes of other states. Section 32-2124(2), R.C.M. 1947 formerly allowed prosecution of D.U.I.'s "upon highways and elsewhere throughout the state" until 1979. However, it is my understanding that during recodification in 1979 that a lengthy bill labeled as a style change bill altered the statutory language of Section 32-2124(2) MCA to the effect that it made a substantive change in the law by eliminating the ability of law enforcement officials to prosecute all D.U.I. offenses anywhere in the state and limited their authority to the "highways of the state".

I am aware of many fact situations involving D.U.I. offenders within Missoula's city limits where the City Police have either apprehended individuals or been called to a location where a D.U.I. offender is located but the offender is not on a highway. The D.U.I. offender is off of a highway by being in such places as a private or publically owned parking lot, a service station fuel pump area, a boulevard, a park, a school campus (university, vo-tech, high school and grade school), a residential yard, railroad right-of-way and property especially along railroad tracks, any type of property owned by a public entity, i.e., military reservations. Ironically, Montana state law still allows the prosecution of anyone who operates or is in physical control of a motor vehicle while he/she is under the influence of a narcotic drug or drug anywhere the offender under the influence of drugs is found within the state.

A person who is operating or in physical control of a motor vehicle while under the influence of either alcohol or drugs is a serious imminent threat or danger to persons and property whether the D.U.I. offender is on a highway or located elsewhere in the state. Clearly, state legislative bodies have a very legitimate and real responsibility to be concerned about regulating drivers who are under the influence of alcohol in areas other than upon the "highways of this state". Most importantly, individuals whose personal safety or property is exposed to the dangers of the individual who operates or is in physical control of a motor vehicle while under the influence of alcohol have a right to be protected from those D.U.I. offenders no matter where they are in this state. The operation of a motor vehicle while under the influence of alcohol is an act which is dangerous to the public wherever it may occur.

The text of 29 A.L.R. 3d 938 at 942 and 951 in discussing the issue of prosecuting D.U.I. offenders anywhere within a state set forth the following with respect to what the Minnesota Supreme Court stated in State v. Carroll (1948) 225 Minn. 384, 31 NW2d 44:

> "...motor vehicle operated by one who is intoxicated can be a dangerous instrumentality, not only because it jeopardizes the safety of the driver himself, but, more importantly, because it creates a hazard to the public at large, and it would be absurd, said the court, to say that one could not be convicted of driving while intoxicated under this statute merely because at the time of the violation the driver happened to be on a private roadway instead of on a public street or highway, because no one

can say when such a person in his confused and befuddled state of mind will leave the private road and pursue a mad, zigzagging course down a public highway or street, with the resulting damage and horrors so frequently reported." (emphasis supplied)

Two other cases that discussed the issue of prosecuting offenders found in places other than on a highway stated the following: In Cook v. State, 220 Ga. 463, 464, 139 SE 2d 383, the Court pointed out that:

> "the court pointed out that the widespread use of motor vehicles, and the use of extensive private property for shopping centers and other purposes with intricate mazes of roadways and driveways, indicated the need for protection of the public from drivers under the influence of intoxicants on places other than public streets and highways. The court further noted that there was ordinarily no immunity from prosecution for crime because the act was committed on private property, even the private property of the accused and that a person had the freedom to use his property as he pleased only so long as he did not thereby endanger the rights of others." 29 a,L.R. 3d 949-950.

The Court in People v. Guynn, 338 NE2d 239, 33 Ill.App.3d 736, 3 National Traffic Law News 71 at 72 (1975) stated the following while upholding the constitutionality of an Illinois statute allowing prosecution of D.U.I. offenders anywhere in the state:

> "...Similarly, in Farley v. State (1965), 251 Miss. 497, 170 So 2d 625, the court gave consideration to the language which made it illegal for an intoxicated person to 'drive any vehicle within the State.' The court in that case stated that the statute 'is not a road regulation but a prohibition against an intoxicated person operating an automobile.' The court found that this was logical because of the potential danger when an intoxicated person operates a motor vehicle. It was stated in the Farley case that a person in an intoxicated condition might not remain off the highway and actually might injure others in other places. See also: State v. Carroll (1948), 225 Minn. 384, 31 NW2d 44. (emphasis supplied)

HB-540 attempts to once again allow in Montana the prosecution of D.U.I. offenders no matter where they are found; that is what the law should authorize. Therefore, I strongly urge your enactment of HB-540. Thank you for your consideration of and support for HB-540.

Sincerely,

Jim Nugent

Jim Nugent
City Attorney

JN:kma

MISSOULA CITY-COUNTY
HEALTH DEPARTMENT
301 West Alder · Missoula, Montana 59802 · Ph. (406) 721-5700

Exhibit D
HB 540
2/10/83

I am Frances D. Alves, Director of the Missoula County Drunk Driver Prevention Program at the Misoula City-County Health Department. I represent a 30-member task force in Misoula concerned about drunk driving. We strongly support House Bill 540.

Drunk driving is a major and serious public health problem. One half of the 50,000 U.S. automobile accident deaths each year are alcohol related; drunk drivers are responsible for 750,000-800,000 auto injuries annually; and alcohol related motor vehicle crashes cost American society $1.8 billion each year. Motor vehicle accidents is the leading cause of death for persons under age 40. Statistics for Montana are at least comparable and in some instances worse than U.S. figures.

1. H.B. 540 and 0.10%. H.B. 540 would make it unlawful and punishable to drive in Montana with a blood alcohol concentration (BAC) of 0.10% or greater. Persons arrested for DUI could then be convicted on a BAC of 0.10% and greater alone, with further evidence, while allowed, not required. This is a very appropriate measure as it will 1)act as a strong deterrent

for DUI; 2)send a message to the public that it will not be easy to get out of a DUI charge; and 3) it will give courts better leverage to force problem drinkers to get treatment.

2. 0.10% BAC and crash probability. Evidence is clear that as BAC rises, the probability of being involved in an alcohol-related accident while driving rises. The risk of fatal and serious injury crashes sharply increases above BAC level of 0.08%. At 0.10% the relative risk for crash involvement doubles and the risk for causing a crash quadruples--for higher BACs even more dramatically. This occurs because of alcohol's ill effects on reaction time, coordination, sight and judgment.

3. 0.10% BAC and the Problem Drinker. The percentage of arrested DUIs that are problem drinkers is approximately 60 to 70%, and yet problem drinkers constitute only 13% of the driving population. The following sequence is instructive of this: 0.10% BAC is legal intoxication with driving impaired for everyone; 0.15% BAC indicates a person with the alcohol tolerance of problem drinkers; 0.18% BAC is the average BAC of persons arrested for DUI in Montana (Department of Highway information).

4. 0.10% BAC and how to get there. A BAC of 0.10% is one-tenth of one per cent alcohol in the blood--for a 100 pound person this is about three drinks (3 cans of beer, 3 glasses of wine, or 3 shots of whiskey)in an hour; for a 160 pound person, five drinks; for a 200 pound person six drinks. (To get to 0.18% the average BAC for DUI arrest in Montana, a 200

pound person would have to drink between 9 and 10 drinks in a short period of time.) We support HB 540 because it protects the health of Montanans. It allows people with BACs of 0.10% or greater to be more consistantly convicted for DUI and to suffer the attendent penalties secifically loss of driver license. The hazard they represent will be removed for a substantial period of time. Two-thirds of these people will probably be problem drinkers. This is further protection of the public's health, because the court system will force these problem drinkers to confront the consequence of their actions (a highly recommend first step for helping those with drinking problems). Problem drinkers are also more likely to be assigned to court-recommended alcohol treatment programs which should help in permanently abating the problem of drunk driving in Montana.

Please support House Bill 540, and help stop the arbitrary and senseless killing of our friends, neighbors and families.

MISSOULA COUNTY
OFFICE OF THE ATTORNEY
MISSOULA COUNTY COURTHOUSE
MISSOULA, MONTANA 59802
TELEPHONE: (406) 721-5700
ROBERT L. DESCHAMPS III
COUNTY ATTORNEY

Exhibit E
HB 540
2/10/83

Betty Wing
Deputy County Attorney
MISSOULA COUNTY

Proponent of House Bill 540

House Bill 540 makes it an offense for a person to drive a motor vehicle while the alcohol concentration in his blood, breath or urine is .10 or more.

The .10 alcohol concentration level has been well accepted by the states as the level at which driving is significantly impaired in all people. Based upon scientific studies and accepted medical knowledge, the American Medical Association recommended the .10 figure as the level rendering a person too intoxicated to drive. The AMA found that as the alcohol concentration reaches or exceeds .10, the degree of intoxication is such that the driving skills is dangerously altered.

The Montana DUI law is governed by the Cline doctrine from the Montana Supreme Court case of State v. Cline, 135 Mt. 372, 339 P.2d 657 (1959). Under the Supreme Court ruling, the law in Montana is as follows:

> "The expression 'under the influence of intoxicating liquor' covers not only all the well-known and easily recognized conditions and degrees of intoxication but any abnormal mental or physical condition which is the result of indulging into any degree of intoxicating liquors and which tends to deprive him of that clearness of intellect and control of himself which he would otherwise possess. If the ability of the driver of an automobile has been lessened in the slightest degree by the use

of intoxicating liquors, then the driver is deemed to be under the influence of intoxicating liquor. The mere fact that a driver has taken a drink does not place him under the ban of the statute unless such drink has some influence upon him, lessening in some degree his ability to handle said automobile."

I would like to emphasize that the law requires only that driving ability be "lessened in the slightest degree." We are accustomed to talking about drunk drivers but a driver does not have to be drunk to be guilty of DUI. He only has to be sufficiently under the influence to affect his judgment and driving ability. The AMA has found that at .10 any person has reached that level.

House Bill 540, therefore, is consistent with Montana law in prohibiting driving with a .10 alcohol concentration.

Similar statutes have been passed in other states and have been upheld by state courts. Oregon's statute was upheld in 1979 in State v. Clark, 286 Or. 33, 593 P.2d 123 (1979). Utah's statute was held constitutional in Greaves v. State, 528 P.2d 805 (1974).

All of us want to prevent the death and injury which drinking and driving cause. This bill will aid in that effort.

I would like to add my support for the portions of the bill allowing alcohol concentration reports into evidence and requiring advance notice for calling lab personnel as witnesses. The Montana Crime Lab has an impossible burden in doing the analysis for DUI's and traveling throughout the state testifying at DUI trials. Any effort to lighten that burden is desirable.

Please support House Bill 540.

Exhibit F
HB 540
2/10/83

Montana Association of Churches

MONTANA RELIGIOUS LEGISLATIVE COALITION • P.O. Box 1708 • Helena, MT 59601

WORKING TOGETHER:

- American Baptist Churches of the Northwest
- American Lutheran Church Rocky Mountain District
- Christian Church (Disciples of Christ) in Montana
- Episcopal Church Diocese of Montana
- Lutheran Church in America Pacific Northwest Synod
- Roman Catholic Diocese of Great Falls
- Roman Catholic Diocese of Helena
- United Church of Christ Montana Conference
- United Presbyterian Church Glacier Presbytery
- United Methodist Church Yellowstone Conference
- United Presbyterian Church Yellowstone Presbytery

February 10,1983

MR. CHAIRMAN AND MEMBERS OF THE HOUSE JUDICIARY COMMITTEE:

I am Cathy Campbell, of Helena, representing the Montana Association of Churches.

I am speaking in support of House Bill 540, which would extend the application of the laws prohibiting driving while under the influence of alcohol or drugs.

We believe that effective law is needed to curb dangerous driving practices. In particular, we endorse legislation that will effectively impede the menace of driving under the influence of alcohol or other drugs.

HB 540 would help accomplish the goals stated in our Traffic Safety position paper, and so we urge your support of this bill.

Exhibit 7.

2/19/83 - H.B. 54

Third Special Report to the U.S. Congress on

ALCOHOL AND HEALTH

JUNE 1978

from the Secretary of Health, Education, and Welfare

Ernest P. Noble, Ph.D., M.D.
Editor

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration

National Institute on Alcohol Abuse and Alcoholism
5600 Fishers Lane
Rockville, Maryland 20857

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402
Stock Number 017-024-00892-3

CHAPTER VIII

ALCOHOL-RELATED ACCIDENTS, CRIME, AND VIOLENCE

Violence, accidental or intentional, constitutes a substantial part of all mortality, illness, and impairment in the United States. Violence plays an especially prominent role in death and injury among younger age groups. For example, accidents are the leading general cause of death for all ages from 1 to 38 *(86)*. Research shows that alcohol often plays a major role in such violent events as motor vehicle accidents; home, industrial, and recreational accidents; crime; suicide; and family abuse.

A recent review of the literature on the role of alcohol in serious events organizes the empirical findings into three major types of studies: (1) alcohol use at the time of the serious event, (2) drinking history and drinking problems of persons in the serious events, and (3) the proportion of alcoholics who experience serious events *(1)*.

The data graphically represented in figures 1, 2, 3, and 4 draw on empirical studies conducted in industrialized countries, particularly in the United States; they show the wide variation in estimates found in these three types of studies. Some of this variation is due to the methodological and reporting problems commonly found in studies of these types, including variation in the definition of casualty events, variation in sample parameters, and problems in alcohol reporting.

Motor Vehicle Accidents

Traffic accidents are the greatest cause of violent death in the United States, resulting in more fatal injuries than any other accident type and causing almost as many fatalities as homicide and suicide combined. Approximately one-third of the injuries and one-half of the deaths resulting from accidents are alcohol related *(171)*. U.S. vital statistics for 1975 reported that traffic accidents accounted for 45,853 deaths; 22,926 traffic deaths involved alcohol.

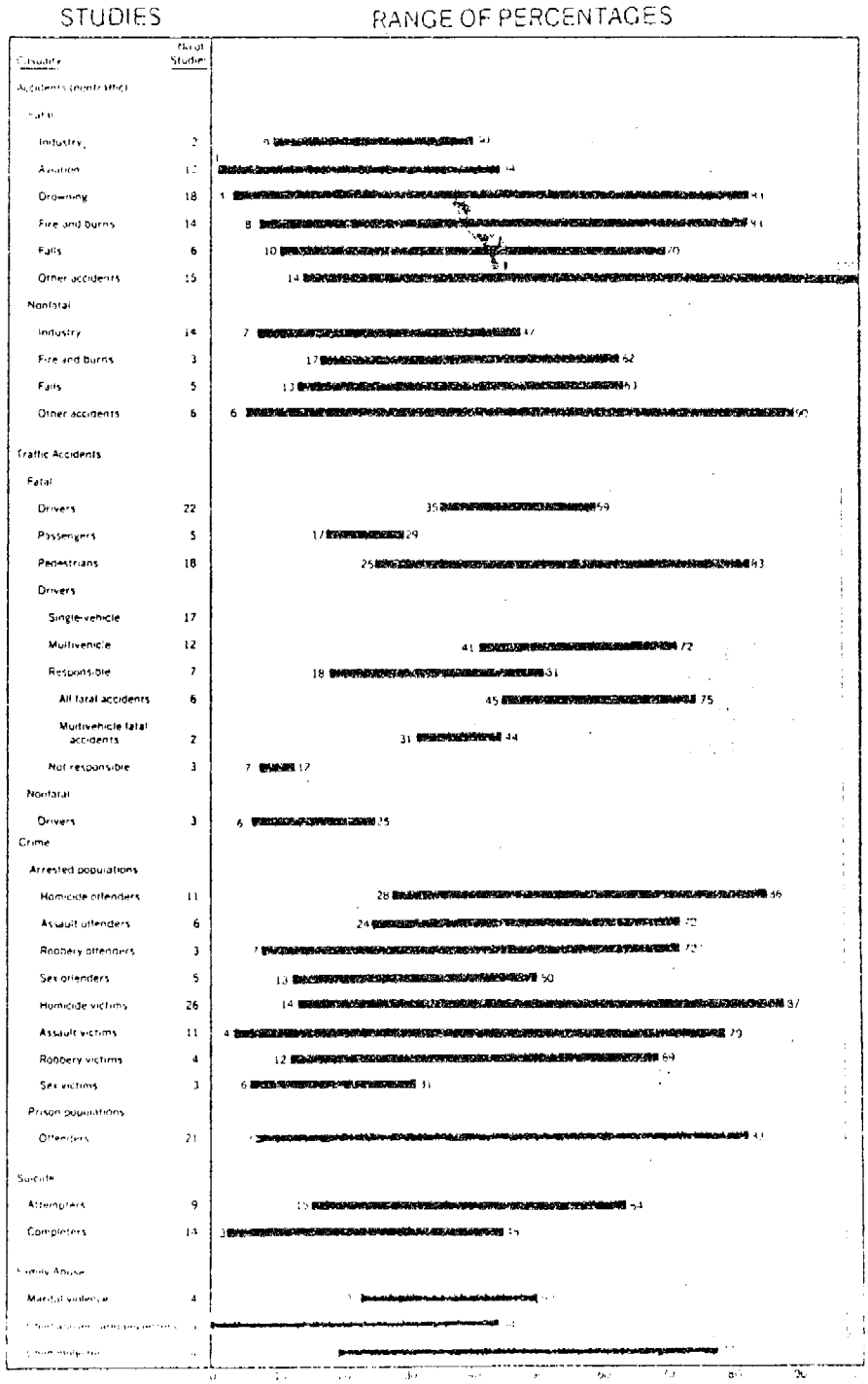
Experimental studies focusing on the short term effects of alcohol have demonstrated that alcohol causes degeneration of driving skills, including reaction time, coordination, visual awareness, and attention, as well as impairment of judgment. However, the full extent to which alcohol use results in traffic accidents due to these impairments is unknown.

Some researchers believe that physiologic impairment of sensorimotor functions caused by excessive alcohol use is the most important factor responsible for alcohol-related traffic accidents *(153)*. Others have demonstrated that factors such as decreased tolerance to tension, recent stress, hostility, depression, impulsivity, and suicidal tendencies are present in a significant number of alcoholics involved in accidents *(24, 85, 104, 106, 118, 119, 120, 121, 122, 123, 124, 128, 129, 133, 152, 153, 155, 156, 157, 158, 162, 164)*. Sufficient data do not yet exist to discriminate effectively between the relative contributions of these factors in the accident experience of alcoholics and problem drinkers.

Driving after drinking is by far the most extensively researched aspect of the relationship between alcohol and traffic crashes. Alcohol involvement usually has been determined by measuring the blood alcohol concentration levels (BAC's) of persons involved in accidents, although police observations also have been used as a measure of alcohol involvement in some studies.

Figure 1 includes a range of findings from American and foreign studies on the estimate of alcohol involvement in serious events. Traffic

Figure 1. Findings of Studies of Alcohol Involvement in Serious Accidents and Crimes



SOURCE: Marc Aarens, Tracy Cameron, Judy Roizen, Ron Roizen, Robin Room, Dan Schneberk, and Deborah Wingard, *Alcohol Casualties and Crime*. Special report prepared for National Institute on Alcohol Abuse and Alcoholism under Contract No. ADM 281-76-0027. Berkeley, CA: Social Research Group, University of California, 1977.

[1] Studies use measures such as BACs, police reports of drinking, witness reports, self-reports.

[2] Includes poisoning, food asphyxiation deaths (choking), frost injuries, deaths, and others.

accidents were labeled as alcohol-involved when people in the accidents were found to have BAC's of 0.10 percent or higher.

More studies exist of fatal than of nonfatal crashes. Although research findings vary substantially on the level of alcohol involvement in various types of crashes, general trends seem to support the following facts concerning the relationship of alcohol and traffic crashes.

(1) As many as 25 percent of drivers in nonfatal crashes and 59 percent of drivers in fatal crashes had BAC's of 0.10 percent or higher.

(2) Up to 29 percent of passengers in fatal accidents showed BAC levels in the legally impaired range.

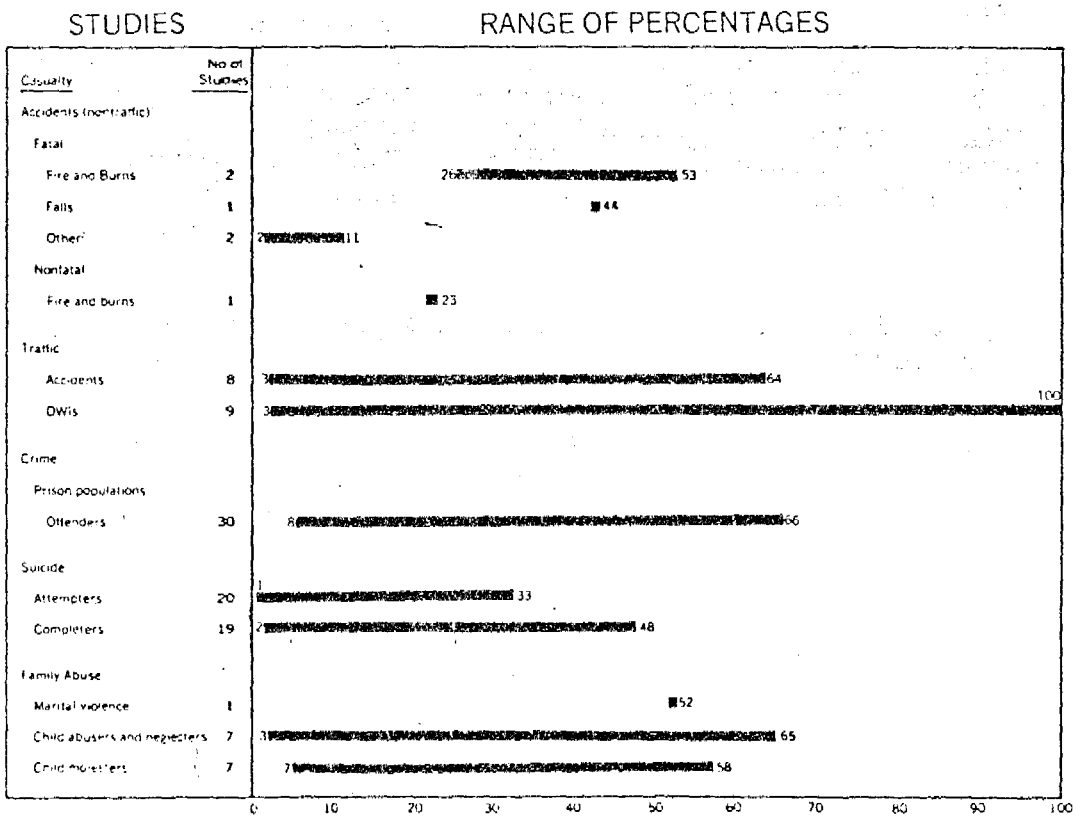
(3) Alcohol could be involved in up to 83 percent of pedestrian fatalities.

(4) As many as 72 percent of drivers in single-vehicle fatalities and 51 percent of drivers in multivehicle fatalities had BAC's of 0.10 percent or higher.

(5) Of the drivers in multivehicle fatal crashes with BAC's in the high range, 44 percent were judged by researchers to be responsible for the crashes, compared to 12 percent judged not responsible.

Data on alcohol involvement in crashes based on a police report *(99)* indicate that the proportion of drivers who were drinking at the time of a crash increases in relation to the severity of

Figure 2. Findings of Studies Reporting the Proportion of Heavy Drinkers or Alcoholics Involved in Serious Accidents and Crimes



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[a] Includes alcoholics, problem drinkers, and high-quantity high-frequency users of alcohol.

[b] Includes, for example, poisoning, food asphyxiation deaths (choking), frost injuries, and deaths.

the crash. The proportion of accident-involved drivers who had been drinking varies across age groups. Several studies indicate that drinking drivers are a relatively small proportion of all accident-involved drivers in lower age groups *(17, 42, 99, 100, 155)*. The proportion of drinking drivers increases and is substantially larger until after age 60, when fewer accident-involved drinking drivers are found. It should be noted, however, that greater total numbers of young drivers than older drivers are involved in accidents.

Studies also have shown that a larger proportion of men than women had been drinking at the time of the crash *(17, 79)*, and that the majority of alcohol-related accidents occur at night *(38, 42, 78)*.

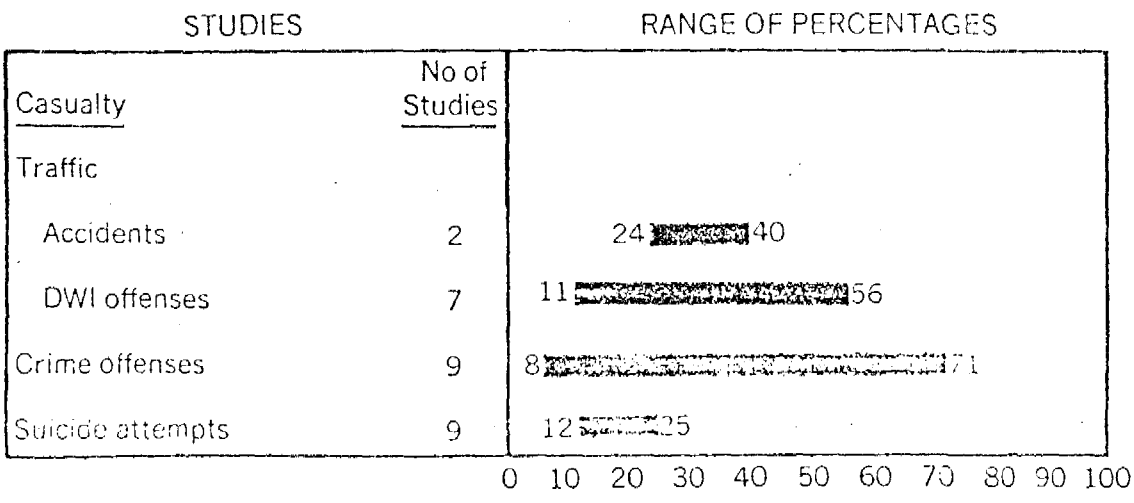
Relative Risk of Crash Involvement

Data from a number of case-controlled studies reveal that even after controlling for exposure to accidents, the relative probability of crash involvement and causation increases dramatically as the BAC rises *(17, 40, 59, 72, 78, 100, 144)*.

Although there is substantial variation among studies in the relative risk factors associated with particular BAC's *(17, 59, 72, 73, 100)*, the general pattern shows that the risk of fatal and serious injury crashes sharply increases above blood alcohol levels of 0.08 percent. Moreover, comparative data from a recent study *(40)* show that the relative probability of causing a crash rises more sharply than the relative probability of merely being involved in a crash at BAC's of 0.05 percent and higher (see figure 5). As figure 5 illustrates, at a BAC of 0.05 the relative risk factor for crash involvement and causation is 1.5 times that at the 0.02 level. When the BAC is 0.10, the relative risk factor doubles for crash involvement and quadruples for causing a crash. With a BAC of 0.16, the likelihood of being involved in a crash is four times greater than at the 0.02 level, and the likelihood of causing a crash is eight times greater. BAC's greater than 0.05 percent increase the risk of being involved in a crash and, even more dramatically, the risk of causing the crash.

Data from several controlled studies also have demonstrated the changing nature of the relative probability of accident involvement as

Figure 3. Findings of Studies Reporting the Involvement of Labeled Alcoholics in Crimes and Nonfatal, Serious Accidents



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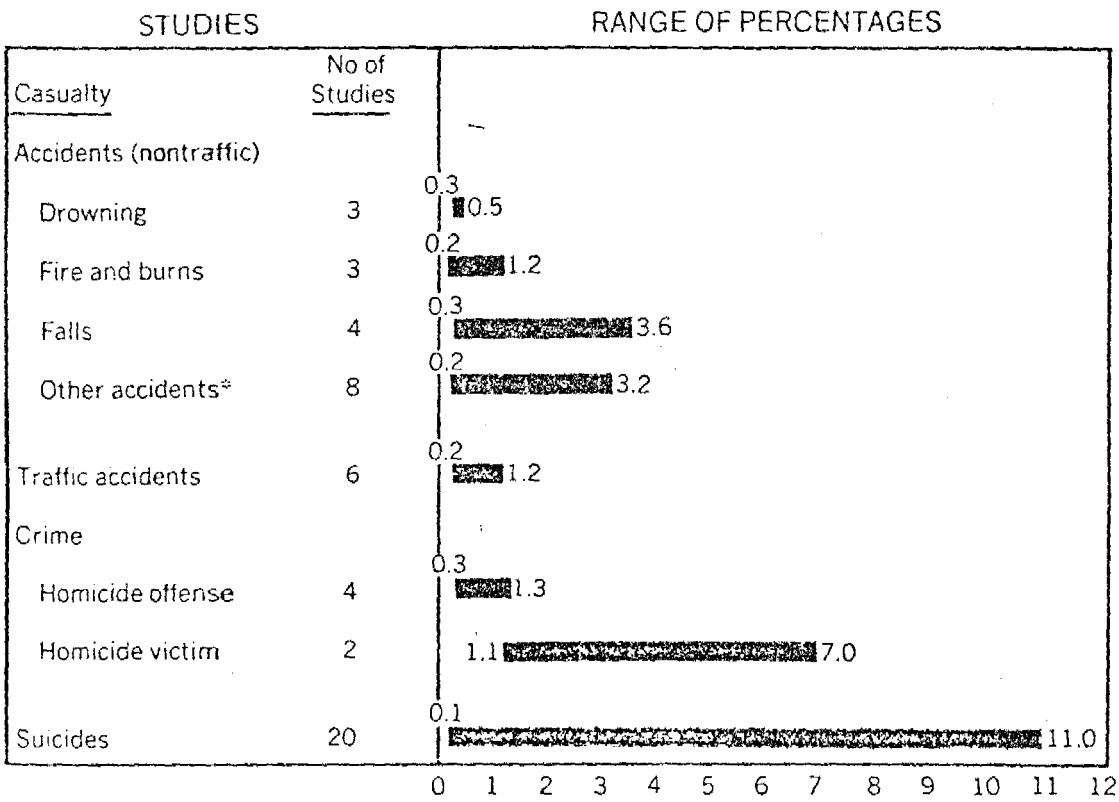
function of alcohol and various situational factors. For example, drivers with BAC's of 0.01 percent to 0.04 percent were overrepresented in crashes during the hours of dense traffic, 6 to 9 a.m. and 3 to 6 p.m.; at all other times of day, they were underrepresented *(170)*.

Despite considerable variation among studies on the relative risk factors associated with specific BAC's and specific demographic characteristics, there also seem to be much greater relative risks for certain demographic groups than for others. For example, the relative probability of accident involvement associated with BAC is markedly different for various age groups *(169)*. Figure 6 shows that at all BAC's, male drivers in the age ranges of 18 to 24 and of 65 and older have a higher relative risk of being involved in a crash than all other male drivers. As BAC increases, this pattern is accentuated, with the relative risk of accident involvement increasing more sharply for very young and very old drivers than for middle-aged drivers. These data suggest, then, that similar BAC's have various effects on the relative risk of accident involvement for different age groups. They also indicate that the relative risk of accident involvement begins to increase at lower BAC's for younger and older drivers. Nonetheless, it should be emphasized that a general pattern remains clear. For men and women, young and old, married and unmarried, and those with high and low occupational status, the relative probability of crash involvement and causation increases as the driver's BAC increases.

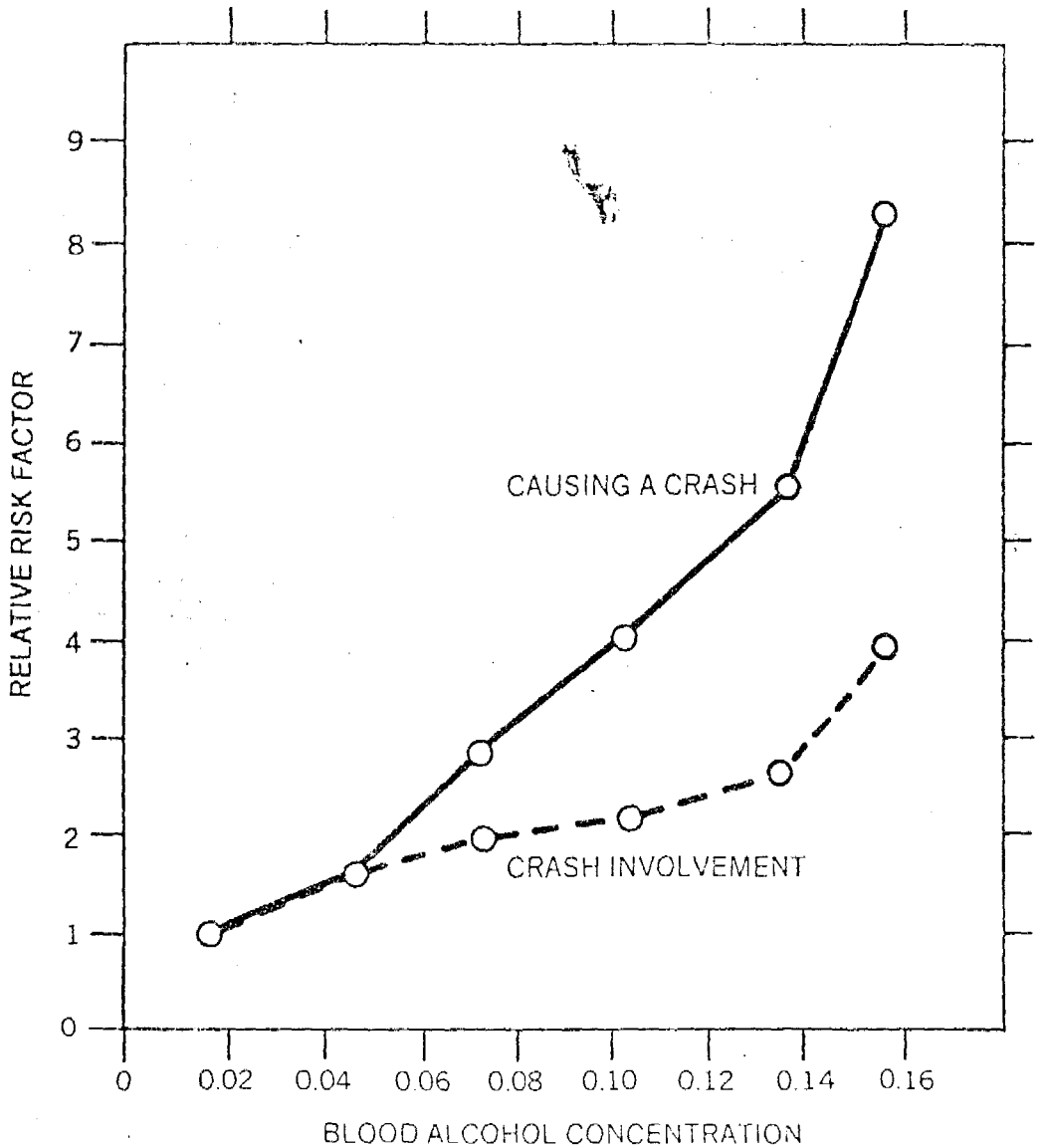
Figure 4. Findings of Studies Reporting the Involvement of Labeled Alcoholics in Crimes and Fatal, Serious Accidents


STUDIES
RANGE OF PERCENTAGES
Casualty
No of Studies
Accidents (nontraffic)
Drowning 3 0.3 0.5
Fire and burns 3 0.2 1.2
Falls 4 0.3 3.6
Other accidents* 8 0.2 3.2
Traffic accidents 6 0.2 1.2
Crime
Homicide offense 4 0.3 1.3
Homicide victim 2 1.1 7.0
Suicides 20 0.1 11.0
0 1 2 3 4 5 6 7 8 9 10 11 12

SOURCE: Marc Aarens, Tracy Cameron, Judy Roizen, Ron Roizen, Robin Room, Dan Schneberk, and Deborah Wingard, *Alcohol Casualties and Crime*. Special report prepared for National Institute on Alcohol Abuse and Alcoholism under Contract No. ADM 281-76-0027. Berkeley, CA: Social Research Group, University of California, 1977.

*Includes, for example, poisoning, food asphyxiation deaths (choking), frost injuries, and deaths.

Figure 5. Relative Probability* that a Driver Causes and Is Involved in a Crash as a Function of BAC Level



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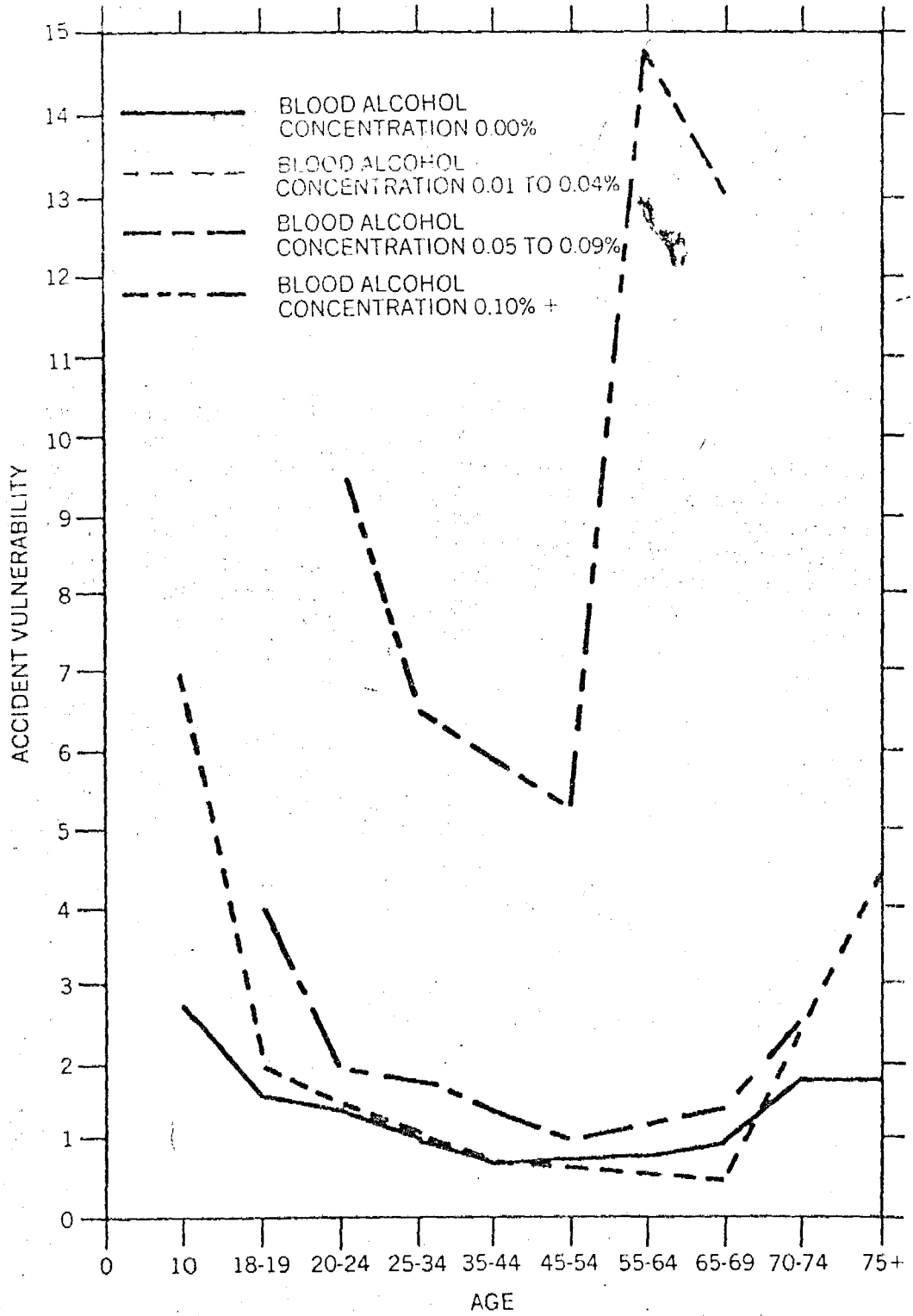
*Relative to the probability that a driver with a BAC of less than 0.03% is in or causes a crash.

Drinking Patterns of Traffic Casualties and Offenders

A well-publicized concept is that a large proportion of people involved in traffic accidents have histories of alcohol-related problems and can be labeled problem drinkers or alcoholics *(118, 121, 122, 135, 152, 157)*. Yet studies are inconsistent in indicating the proportion of crashes that involve alcoholics and problem drinkers (figure 2). Even estimates of the proportion of driving-while-intoxicated (DWI) offenders who can be identified as problem drinkers or alcoholics vary considerably.

Figure 6. Accident Vulnerability as a Function of Age and Blood Alcohol Concentration in Men



SOURCE: Marc Aarens, Tracy Cameron, Judy Roizen, Ron Roizen, Robin Room, Dan Schneberk, and Deborah Wingard. *Alcohol Casualties and Crime*. Special report prepared for National Institute on Alcohol Abuse and Alcoholism under Contract No. ADM 281-76-0027. Berkeley, CA: Social Research Group, University of California, 1977.

Less research has been done on the role of the problem drinker or the alcoholic in traffic accidents and violations than has been done on the incidence of alcohol in these mishaps. Although measurement of alcohol use at the time of the crash is generally well specified and consistent across studies, definitions of alcoholism and problem drinking are often vague and vary considerably among studies, accounting for much variability in research findings.

Several studies have reported that only small proportions—3 to 9 percent—of drivers convicted of DWI or involved in accidents are identifiable as alcoholics on the basis of past treatment for alcoholism at a hospital or clinic *(66, 105, 111, 115, 129)*. However, the proportion of individuals identifiable as alcoholics is increased substantially when multiple criteria for identifying problem drinking are employed. In one study, when persons who received assistance with their drinking problems from family doctors, clergymen, and limited visits with psychiatrists were added to those who received only institutional treatment, the proportion identifiable as alcoholics increased from 3 percent to 11 percent *(118)*. When those identified as having alcohol-related interpersonal, social, and economic problems by family, friends, and employers were added to the others, 37 percent of the sample of drivers could be labeled as alcoholics. Finally, if those drivers who did not fit the definition of alcoholic but who were "frequent, high-quantity users" were combined with the identifiable alcoholics, a total of 48 percent of the drivers could be identified as persons with serious drinking problems *(118)*.

The specific number of problem drinking indicators that would identify persons as alcoholics and problem drinkers has not been established. Traffic studies that rely solely on one indicator to identify problem drinkers, such as a BAC of 0.25 percent or one or more alcohol-related arrests, can be misleading. Where multiple criteria are used, and the person is classed as an alcoholic by satisfying any one of them, researchers may fail to realize that many people in the general population would qualify as alcoholics or problem drinkers if the same criteria were applied to them. Using multiple criteria of problem drinking, one study found that from 36 to 72 percent of American men could be regarded as problem drinkers on the basis of at least one of the several alcohol-related problem indicators *(22)*. If the role of alcoholics and problem drinkers in traffic incidents is to be assessed, more detailed information on the definitional criteria used to identify them, as well as an effort to standardize indicators of problem drinking, will be required.

Driving History of Known Alcoholics

Several studies have presented evidence that the driving records of known alcoholics show that this group has significantly greater numbers of traffic accidents and violations than does the general driving population *(42, 48, 115, 118, 119, 148, 151, 152, 153, 154, 155, 159)*. In 1975, there were 45,853 traffic deaths, an estimated 22,926 of which may have been alcohol related, including as many as 10,546 that may have been related to alcoholism*(118, 147, 150, 151, 152, 153, 184, 188)*.

Data in figure 3, compiled from these studies, reveal that 24 to 40 percent of alcoholics have at least one traffic crash on their driving record. Although the overall range is 11 to 56 percent (figure 3), with the exception of one study that used self-reported data *(123)*, only 11 to 26 percent have at least one conviction for drunken or impaired driving, and 48 to 66 percent have at least one moving traffic violation.

However, data on the circumstances preceding traffic crashes indicate that accident involvement for alcoholics as well as for the general population is a complex phenomenon that should not be attributed solely to the effects of alcohol. One study *(119)* found that 72 percent of the alcoholics and 42 percent of the nonalcoholics in a group of drivers judged to be responsible for fatal accidents had experienced one or more crises in the preceding 1- to 2-year period. In the 6-hour period immediately before the fatal accident, 31 percent of the alcoholics had experienced acute stress, compared to only 13 percent of the nonalcoholics.

In another study of the same group of drivers, alcoholics were 21 times more likely to cause a fatal accident than were moderate drinkers *(20)*.

When recent stress was combined with identification as an alcoholic, the relative risk factor was 32 times that of moderate drinkers without recent stress.

Evidence exists that traffic incidents actually may bring alcoholics into treatment. As one study pointed out, nearly three times as many institutionalized alcoholics had had an accident the year before their admission as in any of the preceding years *(114)*. The investigators caution that if traffic accidents contributed significantly to the process that brings alcoholics to treatment facilities, there would be more accident-involved drivers among treated alcoholics than among alcoholics in the general population. Presumably these samples would tend to inflate the number of alcoholics and problem drinkers with records of traffic crashes and violations.

Home, Industrial, and Recreational Accidents

Alcohol has also been seriously implicated in accidental death and in injury resulting from home, industrial, and recreational accidents. Some accidents are more alcohol related than others: drowning and fires show relatively high rates of alcohol involvement; industrial accidents show relatively low rates. In addition, fatal accidents tend to show higher alcohol involvement than nonfatal accidents, indicating that the presence of alcohol may increase the seriousness of an accident *(1)*.

A national survey found that 36 percent of regular drinkers and only 8 percent of nondrinkers reported two or more accidental injuries in the previous year *(19)*. Heavier drinkers appear to have more accidents than other people *(19, 94, 134)*. Furthermore, alcoholics have a considerably higher rate of accidental death than the general population. American studies have reported the relative risk of accidental death of alcoholics is 16.3 for falls and 2 to 5.7 for other nontraffic accidents, 4.5 to 5 for traffic accidents, 4.4 for homicide, and 2.0 to 4.0 for suicide *(18, 30, 80, 98)*. These relative risks are obtained by comparing the death rate among alcoholics and problem drinkers to rates of a matched control group from the general population.

Industrial Accidents

Occupational accidents affect a substantial portion of the population. The National Safety Council reports that there were 12,600 on-the-job industrial deaths and 2,200,000 injuries in 1975 *(86)*.

Interest in the relationship of alcohol to industrial accidents was stimulated after Jellinek's research on the problem of alcoholism in the 1940's *(65)*. He claimed that there were then 1,370,000 alcoholics employed as industrial workers in the United States who had twice the fatal accident rate of the nonalcoholic working population. As a result of this study, alcoholism was considered a major problem in industrial safety, and other studies were initiated to identify the problem drinker, to estimate the production losses caused by alcoholism, and to determine the number of accidents directly caused by alcohol in the United States.

Studies soon expanded beyond the narrow definition of industrial accidents to include other production losses due to alcoholism such as absenteeism and off-the-job accidents. However, none of the American studies focused on BAC's of industrial accident victims.

In the 1950's, controversy arose in the American literature over whether problem drinkers had higher on-the-job accident involvement than the normal population. Trice maintained that the main consequence of alcoholism to American industry was absenteeism, not industrial accidents *(138)*. Observer and Maxwell in a 1959 study *(92)* interviewed 48 factory workers labeled problem drinkers and found that those under 40 years old had a higher accident rate, but those 40 and older had the same accident rate as a matched control group. The researchers suggested that older alcoholics were conditioned to their illness and had learned how to cope with its effects. Younger workers, however, still had not adjusted to the increased risk their drinking produced on the job.

The preoccupation in the American literature with the impact of the alcoholic on industrial safety and production has discouraged theoretical interest in or empirical research on the direct association between drinking at the time of the event and industrial accidents. Yet ex-

perimental evidence has shown that alcohol inhibits coordination and judgment, lengthens reaction time, and decreases motor performance and sensory skill in simulated industrial work. Wolkenberg's experiments on the effects of alcohol intoxication on normal subjects demonstrated changes in performance up to 18 hours after the ingestion of alcohol *(165)*. Lahelma suggests that the stress and monotony of a job may induce a worker to drink, which in turn may lead to accidents *(68)*.

The lack of American research on alcohol and industrial accidents may also reflect the relative rarity of "drinking on the job" in the United States *(58)*. The one U.S. study on drinking at the time of the accident found alcohol present in 16 percent of nonfatal accident victims reporting to hospital emergency rooms *(159)*. Foreign studies have found alcohol present in from 9 percent to 40 percent of fatal industrial accidents and from 7 percent to 47 percent of nonfatal industrial accidents (figure 1). The data suggest that in both the United States and other countries, there is a lower incidence of alcohol in industrial accidents than in other types of accidents. Nevertheless, studies are needed to compare the proportion of positive BAC's of accident-involved workers to the BAC's of a control group not involved in accidents.

Problem drinkers have a greater likelihood of being involved in industrial accidents than the general population. With the exception of one study of public transport workers in France *(25)*, the relative risk of industrial accidents for alcoholics falls uniformly in the range of 2 to 3 *(73, 84, 92, 146)*.

Aviation Accidents

A substantial proportion of general aviation crashes may be related to alcohol use at the time of the accident—1 to 44 percent (figure 1). Alcohol was found in a larger proportion of general aviation pilots—14 to 44 percent—*(4, 130)* than in military pilots—1 to 5 percent—involved in accidents *(32, 168)*. There are no corresponding studies of pilots in commercial aviation crashes or of general alcohol use by pilots.

Theories about how alcohol might contribute to aviation accidents and deaths suggest that alcohol might encourage risk-taking and daredevil stunts and inhibit psychomotor performance, which several investigators think occur at BAC's as low as .04.

Several experimental studies have assessed alcohol-induced impairment in simulated pilot flight performance *(15)*. In addition, although Newman and MacFarland demonstrated that alcohol is absorbed more quickly at high altitudes, most planes are pressurized and this problem would not be a factor *(74, 88)*.

Drownings

Drowning, a major category of accidental death in the United States, was the cause of death of 7,900 people in 1975; 85 percent were males, and 60 percent were under the age of 25 *(86)*. In American studies, the range of alcohol-related drownings is 12 to 69 percent. Positive BAC's have been found in 4 to 83 percent of drowning victims as reported in American and foreign studies (figure 1). A Swedish study reported that alcoholics had a relative risk of drowning of 3.8 *(31)*. Three studies that followed up treated alcoholics have reported that between 0.3 and 0.5 percent of alcoholics die by drowning *(31, 89, 145)* (figure 4).

Alcohol-related drownings are concentrated among middle-aged persons *(50, 103)*. Alcohol also appears to be more common in swimming deaths than in other types of drowning *(34)*. Furthermore, among swimmers it appears that victims who had been drinking included more good or average swimmers than victims who had not been drinking *(107)*.

Researchers long have recognized alcohol's potential role in drownings. For example, some theories propose that boating accidents frequently are caused by factors associated with alcohol use, such as poor judgment, faulty coordination, and lack of attention. Swimmers may take more risks, such as swimming farther from shore than they normally would; also, the "pseudowarmth" effect of alcohol may encourage remaining in cold water too long, causing overexposure and subsequent drowning *(107)*. When drinking at home, poor coordination can cause a person to fall into a swimming pool or a full bathtub, to be knocked unconscious, and

drown. In any of these situations, alcohol may depress the swallowing and breathing reflexes *(172)*.

Fire and Burns

Alcohol use and alcoholism have been implicated in the cause of fires and in the failure to detect and escape from them. Studies have reported evidence of alcohol use in 9 to 83 percent of all fire fatalities and in 17 to 62 percent of burn injuries (figure 1). Although young children and adults 65 and older are overrepresented in fire deaths, alcohol is found predominantly in middle-aged male fire victims *(14)*.

A history of alcoholism seems to be related to fire involvement. Studies have found that 23 percent of nonfatal burn victims and 26 to 53 percent of fatal fire victims were alcoholics *(27, 54)* (figure 2). A Canadian study found that alcoholics have 9.7 times the risk of dying in a fire than do nonalcoholics *(113)*. Three followup studies, each from a different country, report that approximately 1 percent of all alcoholics die in fires (figure 4).

Alcohol lowers oxidation in the cells and increases a person's chances of succumbing to smoke inhalation and suffocation. In addition, cloudy judgment and slow reflexes may make escape or rescue more difficult.

Cigarette smoking is a major cause of fires; a clear association exists between drinking and smoking in the general population *(23)*. Positive BAC's occur in nearly three times as many cigarette-caused fire deaths as in deaths in fires not caused by cigarettes *(14, 61)*.

Falls

Falls are the most common cause of accidental death in the United States after motor vehicle accidents *(86)*. Balance and locomotor coordination are severely impaired in people who have consumed alcohol, thereby increasing the risk of falls. Alcohol has been found to be involved in 10 to 70 percent of all deaths and 13 to 63 percent of all injuries from falls (figure 1). Age may affect the range of alcohol involvement found because older people are less likely to drink heavily than younger people *(141)*. Deaths from falls are most common among the elderly.

One study reported that 44 percent of deaths from falls involved alcoholics (figure 2). Alcoholics were found to have 5.6 to 13.3 times the risk of dying from a fall than the general population *(18, 89, 113)*. Four followup studies found that between 0.3 and 3.5 percent of alcoholics die from falls (figure 4).

Other Accidents

Little is known about the relationship of alcohol use to other miscellaneous accidents, but the available information suggests that drinking at the time of the event is often very common. Alcohol has been reported in poisonings (9 to 79 percent) *(41, 86)*, food asphyxiation deaths (70 percent) *(57)*, hypothermia (71 percent) *(160)*, frost injuries (90 percent) *(43)*, frost deaths (100 percent) *(43)*, snowmobile injuries (4 to 40 percent) *(83, 156)*, and tractor accident fatalities (41 percent) *(69)*.

Alcohol and Crime

No one knows the full extent to which alcohol is responsible for crime, but alcohol can be involved in forming intent for a crime, in aggravating the course of a criminal event (for example, by triggering excess violence), or in affecting the outcome of crime already completed (for example, by inhibiting the offender's escape). Given the complexity of criminal activity and limited empirical data, it is impossible to determine what crimes would or would not have occurred without alcohol.

Federal Bureau of Investigation crime reports indicate that an average of one arrest was made for every five Americans in 1974, excluding traffic violations *(143)*. Less than 5 percent of crime involves violent conduct, however. Homicide and assault, traditionally thought to have the highest rate of alcohol involvement, represent less than 3 percent of all criminal offenses.

Some alcohol-related crimes, such as arrest rates for public drunkenness, disorderly conduct, and vagrancy, showed a substantial downward trend between 1965 and 1975. This is due largely to the decriminalization of public intoxi-

cation in 28 States, Puerto Rico, and the District of Columbia. However, alcohol-related crimes, including driving-while-intoxicated and liquor law violations, still accounted for 38 percent of FBI-reported crime in 1975. This underestimation of the total role of alcohol in crime does not include such crimes as robbery, assault, and rape in which alcohol was involved.

Because it is very difficult to derive estimates on the use of alcohol in unsolved or undetected crimes, most research on alcohol and crime has involved data either on arrested individuals or on prison populations. Arrest record information provides the most details of the event. Prison population studies typically focus on characteristics of a selected sample of criminal offenders. Recent surveys of chronic inebriate offenders and alcoholics in treatment centers have become an important source of data on alcohol and crime. These are typically small samples of individuals who differ markedly from those found in arrested or prison populations on a number of social, criminal, and drinking characteristics.

Research on Arrested Populations

Research on arrested populations explores situational determinants of criminal events rather than long-term personal or social predispositions to alcoholism, sociopathy, or poverty. The relationship of alcohol to criminal behavior varies by type of crime and by the roles of participants in criminal events. As detailed below, most alcohol-involved violent crime includes both a drinking victim and a drinking offender. Few crimes are committed in which only the victim or only the offender was drinking.

Robbery

Two studies of robbery offenders show widely different estimates of alcohol involvement. One reported that 72 percent *(127)* of the robbery offenders had been drinking prior to the robbery *(127),* and the other found that only 7 percent had been drinking *(90).*

Estimates for robbery victims vary from 12 to 69 percent *(70, 75, 90, 136)* (figure 1). Although the vulnerability of skid row alcoholics to robbery by "jackrollers" is common knowledge *(6, 8, 126, 150),* alcohol use by other robbery victims is a relatively unexplored area.

Rape

Estimated alcohol involvement in sex offenders ranges from 13 to 50 percent and in victims of rape from 6 to 31 percent (figure 1). Some important characteristics of alcohol-involved rape emerged from the largest U.S. study on the subject *(5).* (1) In 63 percent of rapes where alcohol was involved at all, both victim and offender had been drinking. (2) The type and extent of alcohol involvement in rapes was related to the interpersonal relationship of the victim and offender. In 77 percent of cases where only the victim had been drinking, the offender was most likely to be a stranger to the victim. Where only the offender had been drinking, the offender was a stranger to the victim in 53 percent of the cases. When both victim and offender had been drinking, the offender was a stranger in only 23 percent of the cases. (3) Alcohol involvement varied with different types of rape. For example, alcohol was a factor to a considerably greater degree when two men rather than one man or a group were implicated.

Assaults

Assault covers an extremely broad range of action, from angry words to a near fatal attack. The focus in most studies is on serious bodily assault or the threat of serious assault. Estimates of alcohol involvement in reported assaults vary widely, ranging from 24 to 72 percent of the offenders and from 4 to 79 percent of the victims (figure 1). An emergency room study of assaults reported a higher incidence of alcohol involvement—60 percent of the victims *(137)*—than the studies based on police reports—24 to 46 percent *(102, 106).* This may, in part, be due to different definitions of the incident. The emergency room study was based on assault resulting in serious bodily injury *(137);* the police study included attempted assaults *(102*

Homicide

Data on homicide victims obtained through coroners' reports and detailed case studies of

gest that large percentages of offenders and victims had been drinking at the time of the offense. The estimated presence of alcohol in homicide victims ranges from 14 to 87 percent *(82, 131)* (figure 1), but most studies showed alcohol involvement of from 40 to 60 percent. Among the offenders, 28 to 86 percent were reported to have been drinking when the murder was committed *(60, 136)* (figure 1).

Studies on the victims of alcohol-related homicide show variation of drinking involvement by race and sex *(26, 28, 29, 47, 142, 149, 163)*. Homicides involving black male victims consistently show higher alcohol involvement—54 to 70 percent—than white male victims—50 to 58 percent. In general, fewer female than male victims appear to have been drinking. In nonwhite female homicide victims, the proportion of drinkers varies from 30 to 67 percent. Estimates of alcohol presence in homicides involving white females range from 3 to 47 percent.

The presence of alcohol is most likely in homicides where (1) stabbing predominates *(28, 163)*, (2) excessive violence appears to be added to an already violent situation*(28, 147, 164)*, and (3) the victim is thought to have precipitated the murder.

Research on Prison and Alcoholic Populations

Interviewing prisoners on the role of alcohol in their crimes is the oldest and most common type of study of the role of alcohol in crime. These studies show substantial variation in the proportion of offenders who reported that they were drinking when they committed the crime—7 to 83 percent*(36, 162)* (figure 1).

Popular and professional thought more often associates drinking with crimes against the person than with those against property. Prison data, however, indicate that drunkenness at the time is no less common in property than in personal crimes *(110)*. These data contrast markedly to data on arrested populations that found a strong alcohol factor in crimes against people rather than those against property.

The proportions of offenders reporting drinking problems vary considerably—8 to 66 percent (figure 2)—depending on the prison and the alcohol measure used. Prisons with large numbers of chronic inebriate offenders show different patterns of drinking problems than those housing recidivists or offenders convicted of serious crimes *(11, 37, 49)*. Nevertheless, prisoners report substantially more drinking problems than the general population. However, because prisoners appear to have more of many kinds of problems than the general population, no causal relationship between drinking and the criminal activity can be assumed. One recent study of prisoners *(42)* indicates that 60 percent had not finished high school, more than 25 percent were divorced or separated, 31 percent were unemployed before being imprisoned, and 70 percent had served at least one other sentence. In addition, evidence shows that prisoners who are problem drinkers have more problems than other prisoners. A California survey showed that problem drinkers were more likely to be divorced and to have been unemployed prior to their arrest. A recent British study showed that problem drinkers were less likely to have had regular employment and to have maintained contact with their families *(49)*. Problem drinkers also show higher rates of recidivism and assault.

Chronic inebriate offenders, excessive drinkers, and alcoholics in treatment have criminal behavior records far in excess of those expected in a sample of the general population. The evidence suggests that this could be due to the accumulation of social problems in some individuals as much as it could be evidence of a causal relationship between alcoholism or problem drinking and criminal behavior. For example, men convicted of serious offenses may be part of a skid row subculture as much because of their inability to find work or their general hopelessness as because of their alcoholism.

One revealing study found that 186 male inebriate offenders reported 3,078 arrests, 77 percent of which were for public intoxication. Only one-third of the men had a history of any serious crime *(101)*. This finding is consistent with two other studies *(35, 71)*.

Research on chronic inebriate offenders suggests that if serious crime is committed, it occurs early in the criminal career, followed by a longer career of drunkenness offenses *(101)*. The only longitudinal prison study *(52)* obtained

similar findings: "Criminality by and large preceded the development of a drinking problem." If a causal connection exists, it is that of crime "causing" chronic inebriation rather than the reverse.

Alcohol and Suicide

The total annual suicide rate in the United States is 12.7 per 100,000, a rate that has not varied much since 1940 *(140)*. In 1975, 27,063 people in the United States were certified as having killed themselves, making suicide a major cause of death in the United States. It is estimated that as many as 10,000 of these deaths, more than one-third, were related to alcohol.

Various empirical studies have shown that alcohol was involved in 3 to 45 percent of successful suicides and 15 to 64 percent of suicide attempts (figure 1). Although alcohol seems to be a factor in suicide less frequently than in many other casualties, there is evidence that the extent of intoxication during suicide attempts may be vastly underreported. Many suicide studies rely on witness reports, self-reports, or unspecified criteria rather than on measures of blood alcohol. In addition, those who attempt suicide might fear that reports of their drinking would diminish the seriousness of their intentions to end their lives *(64)*.

Researchers have suggested ways in which alcohol has affected the suicide rate. Theories focus on the consequences of drinking immediately preceding a suicidal act and the effects of heavy drinking on the personalities of suicidal individuals. Studies on the short-term effects of drinking and its relationship to suicidal acts have considered both the psychological and physiologic properties of alcohol. Among the psychological effects, alcohol's mood-changing properties have been seen as a possible link to suicidal actions in susceptible individuals. Alcohol is often the drug of choice for those wanting to reduce depression. Although moderate doses of alcohol can achieve this effect, larger quantities can increase both anxiety and depression *(112)*. By increasing the level of depression in a depressed personality, alcohol could precipitate a suicidal act.

Other theories emphasize the disinhibiting characteristics of alcohol. They postulate that alcohol could precipitate a suicidal act by decreasing the critical, life-evaluating functions of the ego, allowing unconscious, self-destructive impulses to gain the upper hand *(145)*. Similarly, experimental findings that alcohol can increase aggression levels have led some investigators to theorize that certain impulsive suicidal attempts may result from an outburst of aggression turned toward the self *(76)*.

Researchers also have looked to the physiologic effects of alcohol to explain the association between alcoholism, alcohol use, and suicidal acts. Today the most common method of attempting suicide is poisoning with drugs. Many who attempt suicide admit taking alcohol with other drugs to increase the effect *(161)*. However, some people with less serious intent to commit suicide do not realize the enormous dangers of alcohol combined with many drugs *(133)*. Under the influence of alcohol, the actions of a person attempting suicide are likely to be more damaging than if the person were sober *(13)*. (See Chapter V, Interaction of Alcohol and Other Drugs.)

Others consider alcoholism an indication of a suicidal personality. It has been suggested that alcoholism is actually a form of suicide, a mode of self-destruction differing from an overt suicide attempt in that it is slow and unconscious *(81)*. Most agree, however, that alcoholism often involves deteriorations of important social relationships, leading to social disintegration, anomie, and other apparently important precipitants of suicide. Using this causal hypothesis, researchers are attempting to establish whether alcoholism preceded, coincided with, or followed the depression, hopelessness, and accumulating troubles thought to occasion the suicidal act *(56, 96)*.

Alcoholics are far more likely to attempt and commit suicide while drinking than nonalcoholics. In several studies of attempted and completed suicide, from 42 percent to 100 percent of the alcoholics had been drinking *(2, 148)*, in contrast to only 8 to 38 percent of the nonalcoholics *(96)*. The explanations for this phenomenon vary. Some theorists believe that intoxication, per se, may be a factor leading to suicide at-

tempts more often among alcoholics than nonalcoholics.

Drinking History and Suicide

Many researchers have reported a substantial proportion of alcoholics in samples of completed and attempted suicides (figure 2). Although the range of alcoholics found in studies of completed suicides extends from 2 to 48 percent, with two exceptions *(21, 62)* most of these studies show that at least 10 percent of suicide victims are alcoholics, and many report 20 percent or more. Because estimates of alcoholism prevalence in the general adult population traditionally have been considerably lower, these studies suggest that alcoholism is several times more common in samples of suicides than in the general population. It has been estimated that up to 8,400 alcoholics may have committed suicide in 1975 *(33)*.

Several studies have indicated that suicide victims labeled "alcoholics" differed from the rest of the sample in several ways other than drinking. For example, a larger proportion of male than female suicides were considered alcoholics, although this may be due in part to the fact that men are labeled as alcoholics more readily than are women *(3, 10, 109, 148)*. Alcoholic suicides often occur in the middle years, at a somewhat younger age than suicides in general. Male suicide victims between the ages of 40 and 50 include a larger proportion of alcoholics than suicide victims in other age categories *(7, 148)*. The "down-and-out middle-aged male alcoholic" has been identified in several studies, and very little alcohol involvement has been found in suicides of younger or older men*(39, 95, 97)*. Palola et al. *(96)*, however, found that in their sample of suicides, the median ages of alcoholics and nonalcoholics were almost the same, indicating that the perceived age difference may be due partly to sample selection.

As in samples of completed suicides, more men than women who attempt suicide are labeled alcoholics *(12, 55, 158)*. The difference in percentages is striking, especially because most samples of attempted suicides include considerably more women than men. Other studies have indicated that alcoholics attempting suicide tend to be older than others who attempt it, although usually they are younger than alcoholics who complete the act *(96)*.

Studies of the drinking histories of those who attempt and complete suicide may be questioned on two major counts. First, the methods and criteria used to identify problem drinkers vary from study to study. Some researchers questioned surviving relatives *(10)*, and others made a psychiatric diagnosis based on the deceased's medical history *(53)*. In some studies, data on the quantity and frequency of drinking came from survivors of suicide attempts *(13)*; in others, persons were labeled alcoholics only if they had been treated for alcoholism *(3, 7, 63, 67, 142, 166)*. Second, demographic variables influence the rates of both suicide and problem drinking. The incidence of alcoholism in suicide samples must be compared to the prevalence of drinking problems among the general population in a demographically comparable sample. Unfortunately, these comparisons usually have not been undertaken.

Suicide Among Labeled Alcoholics

In several studies, between 12 and 25 percent of alcoholics reported having attempted suicide before they either sought treatment or stopped drinking (figure 3). These findings are fairly consistent considering the dissimilarities of time periods, countries, and, presumably, populations involved. Followup studies of alcoholics in treatment report that from 0.1 to 11 percent of alcoholics did commit suicide (figure 4).

Alcoholics are far more likely to attempt and commit suicide while drinking than nonalcoholics. In several studies of attempted and completed suicides, from 42 percent to 100 percent of the alcoholics had been drinking *(2, 148)*, in contrast to only 8 to 38 percent of the nonalcoholics *(96)*. The explanations for this phenomenon vary. Some theorists believe that intoxication per se may be a factor leading to suicide attempts more often among alcoholics than nonalcoholics. Others consider alcoholism an indication of a suicidal personality. It has been suggested that alcoholism is actually a form of suicide, a mode of self-destruction differing from

an overt suicide attempt in that it is slow and unconscious *(81)*.

Most agree, however, that alcoholism alone often involves deteriorations of important social relationships, leading to social disintegration, loss of memory, and other apparently important precipitants of suicide. Using this causal hypothesis, researchers are attempting to establish whether alcoholism preceded, coincided with, or followed the depression, hopelessness, and accumulating troubles thought to occasion the suicidal act *(56, 96)*.

The individual and social factors linking alcoholism to suicide are so varied and the causes of both are so complex that the existence of a single direct cause associated with both is unlikely *(132)*. The several theories on alcoholism and suicide do not indicate a ready formula for reducing the problem. Data show that merely removing alcohol from the situation would not necessarily reduce the incidence of suicidal behavior. Indeed, some evidence suggests that abrupt discontinuation of drinking can lead to suicide in alcoholics *(91)*.

Alcohol and Family Abuse

Child abuse, child neglect, child molesting, and marital violence constitute the most prevalent types of aggression in the family.

In general, empirical data on alcohol involvement in all areas of family abuse are quite limited. Information linking alcohol and its role in specific instances of family violence and neglect is available from only a small number of studies. Moreover, no studies systematically focus on the proportion of alcoholics with histories of abuse in the family.

To a large extent, the traditional sanctity of the family and home discouraged research on family violence and abuse except in the most extreme manifestations such as murder. Researchers as well as legal and social welfare professionals have grappled with the fine line separating criminal or socially unacceptable actions from normatively sanctioned and accepted behaviors. Even in modern Western cultures, regional, individual, and temporal variations exist, for example, in the boundaries differentiating acceptable punishment or discipline of family members from unacceptable violence or aggression.

Child Abuse and Neglect

The little information available indicates that intoxication is a precipitating factor in many cases of child abuse.

In the three studies examining the relationship between parental drinking and abuse *(51, 87, 167)*, the proportion of parents who had been drinking at the time ranged from zero to 44 percent (figure 1). One nationwide U.S. survey of child abuse *(51)* found that the offender's intoxication was a precipitating factor in 13 percent of the cases.

Studies focusing on the drinking histories and drinking problems of child abusers have reported a wide range of findings. The largest American study reported that 38 percent of abusive parents had histories of drinking problems *(167)*; the range across all studies extends from 3 to 65 percent (figure 2).

However, data on the relationship of alcoholism and child abuse give no clear picture. A recent study found no significant difference in neglect by alcoholic (23 percent) and nonalcoholic (21 percent) parents *(116)*. A similar but uncontrolled study of children of alcoholics reported that 10 percent had experienced physical abuse and 65 percent had been emotionally neglected *(16)*. The relationship between alcohol and child abuse remains an important, high-priority topic for future research.

Marital Violence

Several theories might explain the relationship between alcohol use and marital violence. Alcohol often breaks down inhibitions, with resulting atypical and often violent behavior between husbands and wives. Violence is often blamed on the spouse's drinking *(46)*. Research suggests that quarrels arising over one spouse's drinking eventually can result in physical aggression *(46)*.

Although alcohol has served as the basis for a variety of explanatory theories of marital violence, empirical data on alcohol involvement are available from only four studies, two of which were conducted in the United States. Re-

search has focused predominantly on alcohol use during the offense. One study *(44)* reported that 52 percent of violent husbands had histories of problem drinking or alcoholism. Of the four studies investigating the incidence of alcohol in [illegible], three reported that from 44 to 50 percent of the violent incidents involved alcohol *(44, 46, 48)*, and one reported 21 percent *(9)*. However, Bard and Zacher *(9)*, analyzing calls made to a local police department for assistance in domestic disturbances, noted a substantial discrepancy between the officers' and the involved parties' impressions of alcohol involvement. Fewer than half the cases of reported drunkenness were corroborated by the police.

Recent information on the association of alcohol and belligerence in the family is available from a nationwide survey of drug use among young males*(93)*. Nineteen percent of the respondents reported having had some alcohol-related problem with a wife or girlfriend, 18 percent with parents, and 8 percent with friends or housemates. The data also suggest that belligerence in alcohol-related interpersonal disagreements is strongly associated with heavy drinking. Those who drank more heavily were more than twice as likely as others to report alcohol-related belligerence problems in their relationships. However, these problems were not confined to this group. Further analysis suggests that alcohol-related belligerence is more a function of interpersonal friction over drinking than of any special propensity to belligerence *(1)*.

Child Molesting

Recent research has suggested that child molesters often use drunkenness as an excuse for their offenses *(77)*. The general social and physical deterioration associated with the long-term effects of alcohol could be a contributing factor in many instances. The drug's short-term effect of lessening awareness of socially defined boundaries between acceptable and unacceptable behavior could play a significant role*(45)*.

Empirical data on alcohol and child molestation reveal considerable variation with respect to alcohol involvement at the time of the offense and in the drinking histories of the offenders. Statistics indicate that 19 to 77 percent of offenders were drinking at the time of the offense (figure 1) and that 7 to 58 percent were identifiable as alcoholics (figure 2). Some research has focused on specific types of offenders, such as those involved in incestuous, heterosexual, and homosexual child offenses. One study, for example, reported that heterosexual child molesters using force or threat were significantly more likely both to be drunk during the offense and to be identifiable alcoholics than were all other types of child molesters *(45)*. Furthermore, in this study, alcohol involvement was more frequent in offenses against children than against teenagers.

Another study found that offenders who drank at the time of the assault and the proportion identifiable as alcoholics tended to molest girls rather than boys *(108)*.

Summary

- Alcohol is significantly involved in motor vehicle accidents; home, industrial, and recreational accidents; crime; suicide; and family abuse. Accidents and violence play an especially prominent role in death and injury among the younger age groups.
- Half of all traffic fatalities and one-third of all traffic injuries are alcohol related, according to current estimates.
- Drinking by drivers plays a greater role as the severity of the crash increases. Up to 59 percent of fatal crashes and 25 percent of nonfatal crashes involve drinking drivers with blood alcohol concentrations (BAC) of 0.10 percent or higher.
- The probability of crash involvement increases dramatically as a driver's BAC increases. The relative risk factor of being involved in or causing a crash at a BAC of 0.05 percent is one-half times that at 0.02 percent. At a BAC of 0.10 percent, compared to 0.02 percent, the relative risk doubles for being involved in a crash and quadruples for causing a crash.
- At all BAC levels, male drivers aged 18 to 24 years or 65 years and older are the most likely to be involved in a crash.
- In studies in which multiple criteria are used, up to 37 percent of DWI (driving while intoxicated) arrestees are identified

as alcoholics, and a total of 48 percent are identified as persons with serious drinking problems.

- A significant number of industrial and aviation accidents, drownings, burns, and falls have been attributed to drinking. Studies have found that up to 40 percent of fatal industrial accidents, 69 percent of drownings, 83 percent of fire fatalities, and 70 percent of fatal falls were alcohol related.
- While information on the role of alcohol in crime is limited, studies show relatively high involvement of alcohol in robbery, rape, assault, and homicide. Alcohol-involved crime often includes both a drinking offender and a drinking victim.
- More than one-third of all suicides involve alcohol, and disproportionately high numbers of people with drinking problems commit suicide. In 1975, as many as 10,000 suicides were related to alcohol use, and up to 8,400 alcoholics committed suicide.
- Alcohol and family abuse is a neglected area of research. Excessive drinking has been implicated in child abuse, child molesting, and marital violence. A large number of child abusing parents have histories of drinking problems.
- There is a great need for improved (definitive) epidemiologic data on alcohol-related deaths, injuries, and acts of violence, including determining the proportion that is directly attributed to the alcoholic population.

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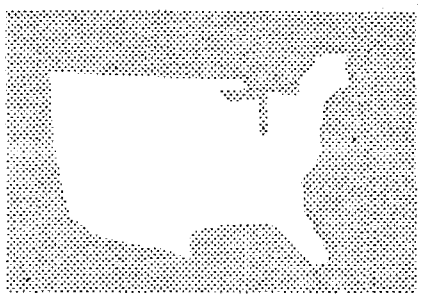
President Establishes Commission on Drunk Driving



This spring, the problems related to driving while intoxicated (DWI) received national recognition at the highest level when President Reagan established a 30-member Presidential Commission on Drunk Driving to combat what he called an "epidemic" of drunk driving on the Nation's roads.

"Nearly 50,000 people were killed on our highways last year," President Reagan said. "Now, out of these statistics, comes an even more chilling one. Drunk drivers were involved in 25,000 of those fatalities, in addition to 750,000 injuries per year.

"Americans are outraged that such a slaughter of the innocent can take place on our highways. Our anger and frustration are matched only by the grief of those who have lost loved ones in such accidents."

The Commission hopes to heighten public awareness of the DWI problem and serve as a catalyst for grassroots action. Commission members will meet with State and community officials to enlist their support, help develop citizen interest and support, and encourage local programs to increase DWI arrests and use sanctions, such as license suspensions and revocations, to reduce the incidence of the problem.

President Reagan has appointed John A. Volpe, a former governor of Massachusetts and Secretary of Transportation during the Nixon administration, to head the Commission. Citing the need for a comprehensive approach to the problem, Volpe said, "By coordinating and improving the ways in which the police, prosecutors, judges, and treatment personnel deal with the drunk driver, we have learned how to build on our own experience. . . . Americans everywhere are fed up with the toll the drunk driver exacts from us every year. Billions of dollars and almost countless human tragedies occur year in and out, and it is time to begin to bring this under control."

The Commission will promote a six-point program that emphasizes the following:

- Conducting programs to deter the majority of drunk drivers who are never arrested, while continuing to emphasize treatment for those who are
- Placing program emphasis and responsibility at the local level
- Integrating and coordinating enforcement, prosecution, adjudication, education and treatment, public information and education, and licensing functions at the local and State levels
- Assessing fines, court costs, and treatment tuition fees on convicted drunk drivers to defray the costs of local and community programs
- Generating community and citizen support for comprehensive community programs
- Changing societal attitudes toward drinking and driving through long-term prevention and education programs.

The Commission is expected to play a key leadership role in a broad-based campaign to improve highway traffic safety by reducing driving while intoxicated, initiated by the National Highway Traffic Safety Administration (NHTSA). The agency is also focusing on encouraging drivers to use safety belts.

The members of the Presidential Commission, in addition to Volpe, are V.J. Adduci, president and chief executive officer of the Motor Vehicle Manufacturers Association of the U.S., Inc. in Washington, D.C.; Van Henry Archer, Jr., a council member in San Antonio, Texas, and a stockbroker with George E. Dullnig Company; Ross Barrett, senior vice president and senior corporate officer on the West Coast for Metromedia, in Los Angeles, California; Michael D. Bradbury, district attorney for Ventura County in California; Morris E. Chafetz, M.D., president of the Health Education Foundation in Washington, D.C.; Joseph M. Dealey, chairman of the board of A. H. Belo Corporation and publisher of *The Dallas Morning News;* James R. Edgar, secretary of state of Illinois; Sherman G. Finesilver, district judge, United States District Court in Colorado; James S. Kemper, Jr., chairman

of the board, Kemper Insurance Group, in Long Grove, Illinois; Henry B. King, president of the U.S. Brewers Association, Inc., in Washington, D.C.; Patience Latting, mayor of Oklahoma City, Oklahoma; Ann Landers, syndicated human relations columnist; Candace Lightner, of Fair Oaks, California, president and chief executive officer of M.A.D.D. (Mothers Against Drunk Driving); Forrest Lowery, safety program coordinator for the Minnesota Department of Public Safety; G. W. Hank McCullough, self-employed in real estate and communications and a founder of the Alcoholism Council of California and its president for the first 5 years; Frederick A. Meister, Jr., president of the Distilled Spirits Council of the United States, Inc., in Washington, D.C.; William N. Plymat, executive director of the American Council on Alcohol Problems in Des Moines, Iowa; Joseph A. Pursch, M.D., corporate medical director and member of the board of directors of Comprehensive Care Corporation (CompCare) and in private practice in Laguna Niguel, California; Walter Shea, executive assistant to Teamsters Union general president Roy L. Williams; Milton Skyring, project director of Checkmate, Baton Rouge City Court, Louisiana; William T. Smith II, of the New York State Senate and chairman of the Senate Special Task Force on Drunk Driving; Stan Statham, State Assemblyman in California; Vincent L. Tofany, president of the National Safety Council; Dick Vincent Van Patten, an actor in Beverly Hills, California; and Frank D. White, Governor of Arkansas. In addition, the majority leader of the Senate and the Speaker of the House have designated two members of each House of Congress to participate. They are Senator Robert Dole of Kansas, Senator Claiborne Pell of Rhode Island, Representative James V. Hansen of Utah, and Representative Michael D. Barnes of Maryland.

The Executive Director of the Commission is Eugene Lipp. NHTSA will provide staff support to the Commission as needed. Lipp can be contacted at the U.S. Department of Transportation, 400 Seventh Street, S.W., Room 4109, Washington, D.C. □

—Nancy Johnson
Staff Writer

Facts and Findings About Drinking and Driving

Editor's Note: The literature on alcohol and traffic safety is extensive. This feature highlights some of the facts and figures on the subject, and is drawn from a review of research documents conducted for the National Institute on Alcohol Abuse and Alcoholism by Danielle Spiegler, Division of Research.

Scope of the Problem

Traffic accidents are the major cause of violent death in the United States (NIAAA 1981, p. 81).

In 1980, an estimated 51,077 people died in motor vehicle crashes (NHTSA 1981).

Between 40 and 55 percent of fatally injured drivers whose blood alcohol concentration (BAC) was tested had BACs of at least .10 percent. Eighty percent of this group had BACs of more than .10 percent, well over the legal level of intoxication in most States. The average BAC of fatally injured drinking drivers who were tested was greater than .20 percent (NHTSA 1978).

As many as 25 percent of drivers in nonfatal accidents had been drinking prior to the accident (NIAAA 1981, p. 81).

Alcohol-related accidents more frequently involve only a single car and driver than do accidents in general (NIAAA 1978).

Motor vehicle crashes related to alcohol cost American society $1.8 billion a year (Cruze et al. 1981).

Most of alcohol-related accidents occur at night. Weekend crashes are somewhat more frequent than weekday crashes (Jones and Joscelyn 1978, p. 34).

In the U.S. annually, 8,000 or more pedestrians are killed and another 100,000 are injured in traffic accidents; postmortem blood alcohol test results indicate that 44 percent of those tested had been drinking and 35 percent had a BAC of .10 percent or greater (NHTSA 1980-81).

Demographic Variables

Foremost among problems in the epidemiologic literature on alcohol and highway safety is the lack of current comprehensive studies comparing the characteristics of drivers in crashes with those of a control group of drivers exposed to the same driving environment (the road, the time) as the crash-involved drivers (Jones and Joscelyn 1978, p. 5).

Variables that appear to be strongly associated with alcohol-related crash involvement, risk, or both, are sex, age, time of day of crashes, day of week of crashes, number of prior arrests for driving while intoxicated (DWI), frequency and quantity of drinking, type of beverage preferred, and history of alcoholism or problem drinking (Jones and Joscelyn 1978, pp. 44-45).

Among demographic variables, sex is one of the best differentiators of drinking drivers. There are far more male drivers than female drivers in alcohol-related crashes, primarily because men drive more than women do (especially after drinking), rather than because of any inherent difference between sexes in tolerance to alcohol (Jones and Joscelyn 1978, p. 30). Greater frequency of drinking is positively associated with more frequent drunken driving and is negatively associated with accident risk at any blood alcohol level (Reed 1981; Jones and Joscelyn 1978, p. 38).

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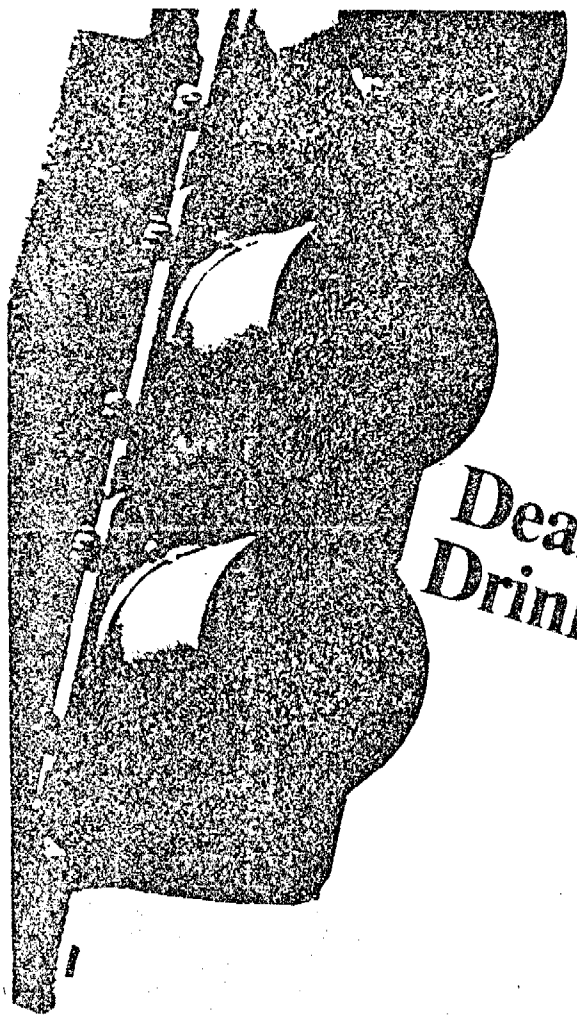
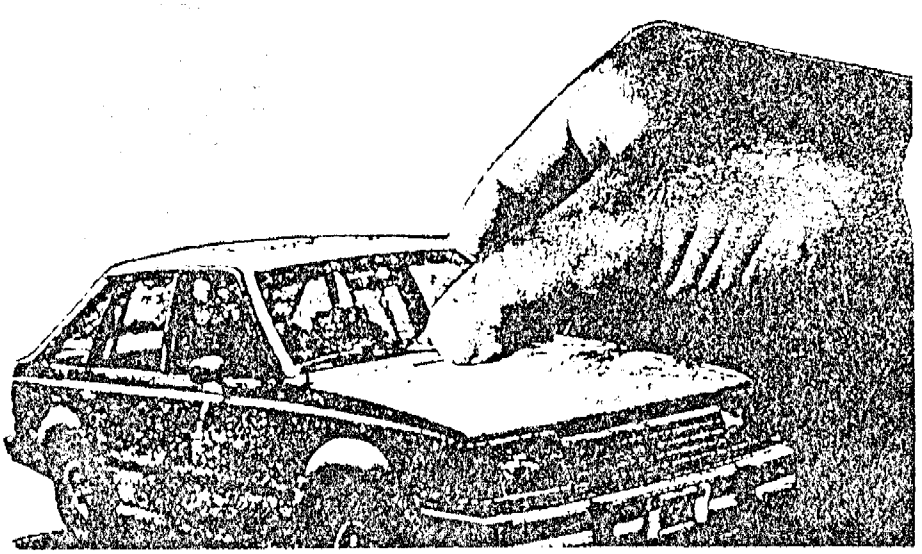


Dealing with the Drinking Driving Problem

David S. Reed



Editor's Note: This article is condensed from a paper commissioned by the National Research Council's Panel on Alternative Policies Affecting the Prevention of Alcohol Abuse and Alcoholism. The full paper was published in the panel's report *Alcohol and Public Policy: Beyond the Shadow of Prohibition*, edited by Mark H. Moore and Dean R. Gerstein, and published in 1981 by the National Academy Press in Washington, D.C. The excerpts are reprinted by permission of the National Academy Press and the author.

Public concern over the dangers of drunk driving is almost as old as the automobile. Indeed, few authors on the subject can resist citing the "motor wagons" editorial in the *Quarterly Journal of Inebriety* in 1904. Despite the long history of concern and the many attempts at control, drunk driving is still perceived as a major highway safety problem.

The importance of drinking-driving is frequently expressed in terms of the costs associated with it. Frequently cited figures are that "approximately one-third of the . . . injuries and one-half of the fatalities [from traffic accidents] are alcohol related" (NIAAA 1978, p. 61). While these figures are accurate, they are not as useful in determining an appropriate level of government effort as are the potential savings that effective drinking-driving countermeasures could achieve. Fortunately, several studies have surveyed the blood alcohol concentration (BAC) of drivers involved in accidents and drivers in matched control groups. From data in these studies I have calculated the relative risk of accident for drivers in various BAC ranges and the overall reduction in accidents if all drivers had the accident risk associated with a BAC of zero; that is, the accident reduction that would occur if a perfectly effective countermeasure eliminated drinking-driving. The results are presented in table 1. (For an explanation of the method by which these figures are derived, please see the original article.)

Table 1. Expected reduction in motor vehicle traffic accidents if all drivers had a zero BAC

Type of accident, place and time	Expected reduction (percent)
Fatal, Vermont, 1967-1968	23.7
Injury, Huntsville, 1974-1975	15.8
Injury, Grand Rapids, 1962-1963	8.2
Property damage, Grand Rapids, 1962-1963	5.7

These maximum potential savings are significantly lower than the percentages of alcohol-related accidents because some accidents involving drinking drivers would have occurred even if the driver had not been drinking. The accident reduction figures in table 1 can be roughly converted to absolute terms using estimates of the number of fatal, injury-producing, and damage-producing motor vehicle accidents nationwide in 1977 (National Safety Council 1978) and the average property damage per accident (Jones and Joscelyn 1978). The resulting estimate is that a perfectly effective drinking-driving countermeasure would have prevented 11,700 deaths, 156,000 to 300,000 disabling injuries, and $963 million in property damage in the United States in 1977.

The remainder of this article examines the promise of various drinking-driving countermeasures for realizing part of this potential savings.

Exposure Reduction

The drinking-driving countermeasure strategy that occurs first to most people is exposure reduction: reducing the amount of drunk driving that takes place and thereby reducing accident costs. There are several approaches in achieving exposure reduction:

- General deterrence: countermeasures that seek to prevent drivers in general from combining driving with drinking in excess of legally prescribed limits (0.10 percent blood alcohol content (BAC) in most States).
- Recidivism reduction (specific deterrence): countermeasures that seek to specifically compel those people who have already been arrested for driving while intoxicated (DWI) not to drive drunk again.
- Third-party intervention: countermeasures that seek to influence those around potential drunk drivers (servers of alcohol, fellow party guests or bar patrons, etc.) to prevent them from driving while intoxicated.
- Altering the legal minimum drinking age.
- Screening the driving population for those most likely to drive drunk.
- Installing devices in vehicles to automatically detect drunk drivers.
- Providing alternative transportation for potential drunk drivers.

General deterrence. The most effective general deterrence programs have been those that raised drivers' perceived risk of arrest and punishment for drunk driving. In Britain, fatalities from traffic accidents decreased initially by 23 percent in response to the widely publicized Road Safety Act of 1967, which allowed police to require alcohol breath tests of drivers. Passage of similar legislation in Canada brought about an 8 percent reduction. But in both cases the deterrent effect "evaporated" over time, apparently

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Facts and Findings

Young Drivers

Motor vehicle accidents are the leading cause of death among young people 15 to 24 years old.

Among sober drivers, teenagers are two to three times more likely to be involved in accidents than are drivers in their forties. Even low amounts of alcohol accentuate this difference, and the trend becomes more pronounced as BAC increases (Borkenstein et al., cited in Voas and Moulden 1980).

There are proportionately more young drivers than older drivers on the road on weekend nights. They also appear to have a higher risk of involvement in nighttime and alcohol-related crashes than do their elders (Voas and Moulden 1980).

Blood Alcohol Levels and Risk of Crash Involvement

The relative probability of crash involvement increases as blood alcohol level (BAC) increases. At a BAC above .10 percent, the relative probability was found to be several times that for 0.0 BAC (NIAAA 1981, p. 81).

There is no apparent increase in the relative crash probability at BAC's below .05 percent (Seppala et al. 1979). However, the risk of being in a crash begins to increase very rapidly at BACs above .08 percent. There is a greater than 20 to 1 relative probability of crash involvement at BACs over .15 percent (Jones and Joscelyn 1978, p. 22).

For drivers with BACs of .10 percent or more, the probability of being involved in fatal crashes was 12 times as high as for those who had not been drinking at all (Hurst 1974, cited in Jones and Joscelyn 1978, p. 22).

BACs are higher in drivers killed in one-car than in two-car accidents, and also higher in those involved in nighttime crashes than in daytime accidents. Among drivers under age 30, those involved in weekend accidents have higher BACs than those involved in weekday accidents (Rosenberg et al. 1974).

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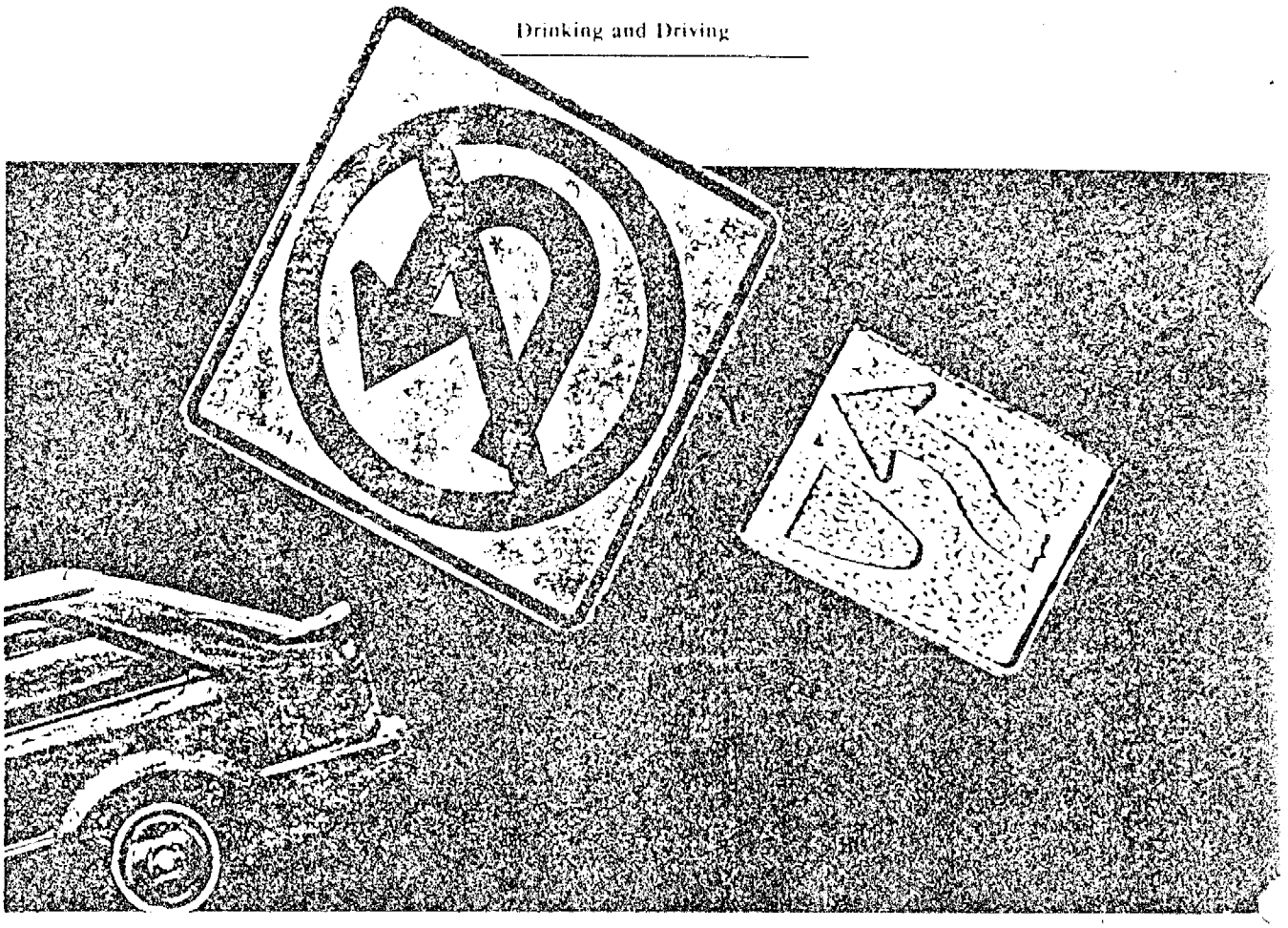


because drivers whom publicity had convinced of a new higher risk of arrest learned from subsequent experience that the risk had not really increased much. To achieve permanent deterrence, we would presumably have to raise the actual risk of arrest, and to keep it high.

Targeting patrols by day of week, time, and geographic location, legislative and technical progress toward making breath tests for alcohol easier to administer, and simplifying the process of making a DWI arrest and providing police with motivation to make such arrests are all ways to increase the risk of arrest. Using such methods, Alcohol Safety Action Projects (ASAPs) were able to double and triple the number of DWI arrests, although it is unclear how much of this increase resulted merely from charging drivers with DWI rather than a specific moving violation (Zimring 1978, pp. 151-152).

What remains unknown is just what levels of risk are necessary to achieve various degrees of deterrence and what it would cost to bring about such increases in risk. These questions appear to require empirical study.

If increasing risk of punishment can deter drunk driving, then what about increasing the severity of punishment? It seems at first glance easier and less expensive to hand out stiffer penalties to convicted drinking drivers than to beef up enforcement.

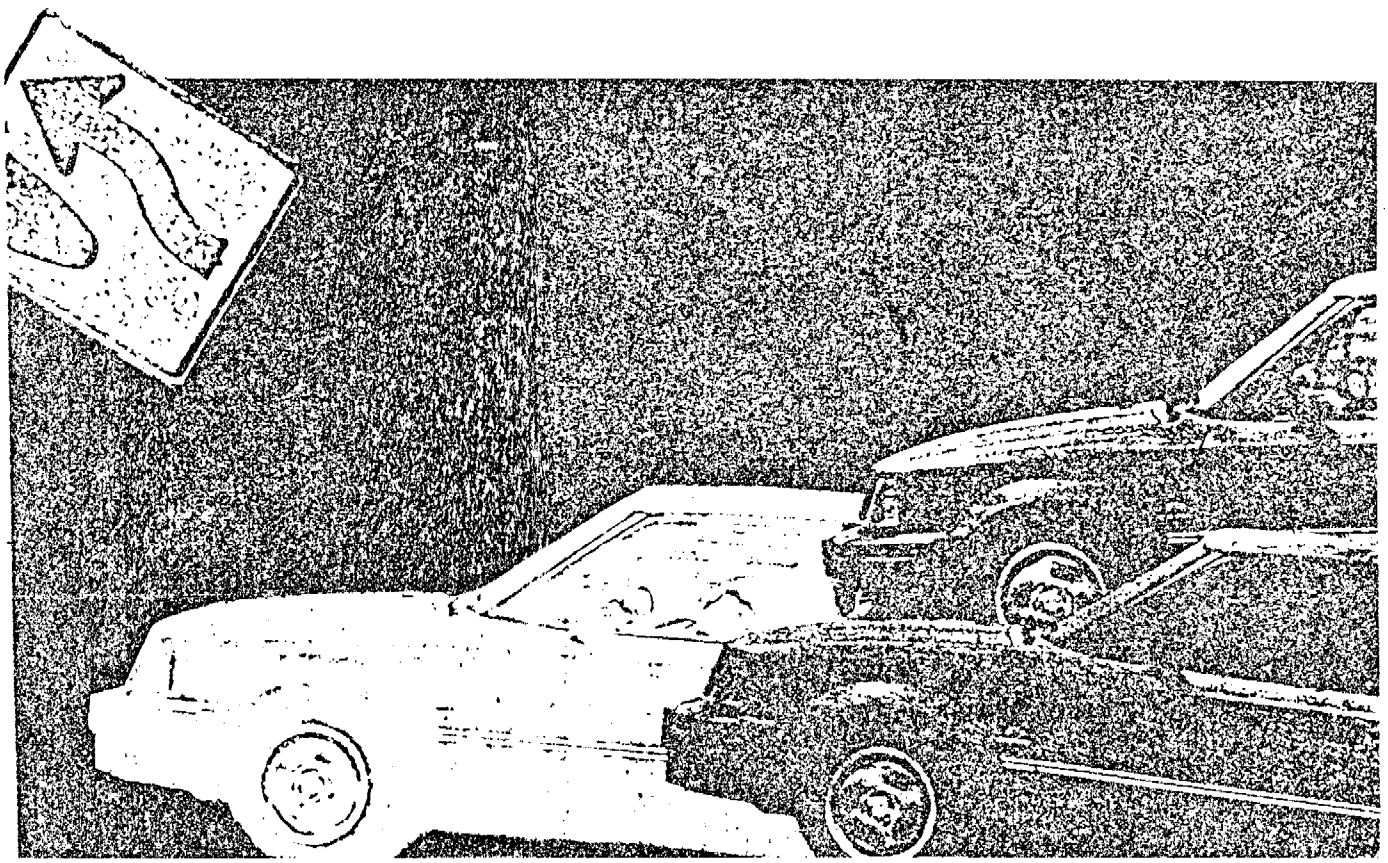
Available evidence does not suggest that the severe punishment approach is effective, however. The reputed effectiveness of severe punishment for drunk driving in Scandinavian countries could not be confirmed by scientific study (Ross 1975), and is of questionable relevance to American drinking-driving behavior. In fact, a Chicago program requiring 7-day jail sentences for DWI offenders resulted in a decreased conviction rate (Robertson et al. 1973). In a Nation where 75 percent of drivers admit to driving after drinking (USDOT 1968), it is not surprising that judges, juries, and even police and prosecutors are often reluctant to subject drinking drivers to severe punishment.

Even if severe punishments were authorized and used, it is unclear whether the small risk of a sizable fine or short prison sentence would have an appreciably greater deterrent effect than the small risk of a modest fine or license suspension. After all, those who currently drive drunk do not seem to be deterred by the small risk of a very severe penalty—accidental death.

We should also recall the wholesale application of a severe punishment approach would mean lengthier trials, more appeals, and perhaps imprisonment—all of which carry costs. I believe this money would be better spent increasing the risk of punishment.

The third approach to achieving general deterrence is public information and education. A recent report by the U.S. General Accounting Office (Comptroller General of the U.S. 1979, p. i) makes this claim: "Before any significant reduction in alcohol related traffic accidents will occur, a long-term continuous educational commitment must be made. Governments, educational institutions, and the general public need to work together to change attitudes about drinking and driving."

There are three avenues for using public information and education to achieve general deterrence. The first is to inform potential drunk drivers of the risks they face—accident and arrest—if they drive while drunk. The potential effectiveness of this avenue is dubious, since it appears that the public is quite familiar with these risks. A



campaign of public information and education that merely repeats what is generally known or fills in small details seems unlikely to cause much change in drinking-driving behavior.

The second avenue is to try to alter norms and standards of behavior of people who drink and drive so as to make drunk driving less likely. But these are set and reinforced by a person's entire social environment, and may be an important part of his or her group identification (Maloff et al. 1980). They seem unlikely to change in response to an advertising campaign.

The third avenue is to provide potential drunk drivers with information that will make it easier for them to avoid driving while dangerously or illegally drunk. Such information might include simple rules of thumb for determining how many drinks a person of a given weight can drink on a full or empty stomach before reaching the legal BAC limit, simple, self-administered sobriety tests, or socially and economically acceptable alternatives to driving home after having had too many drinks. Of course, such a campaign would hinge on the existence and effectiveness of such rules of thumb, tests, and alternatives.

Attempts to achieve general deterrence of drunk driving through public information and education have generally employed the first two avenues, describing the risks of drunk driving and trying to form attitudes against it. While there have been many such campaigns, a relatively small number have been subjected to scientific evaluation of their impact on drinking-driving behavior (Jones and Joscelyn 1978; Organisation for Economic Co-operation and Development 1978; Wilde 1971). Of these, none were found to have prevented accidents.

In conclusion, general deterrence of drunk driving does seem possible if a high perceived risk of arrest can be sustained. Severe punishment does not appear as promising as increased arrest risk for achieving general deterrence. Public information and education campaigns that provide information useful to those who wish to avoid driving while dangerously or illegally drunk, without radically changing their drinking or driving behavior, may also be useful.

Reduction of recidivism. The potential reduction in traffic accidents obtainable by reducing DWI recidivism is sharply limited because only 10 percent of drunk drivers in fatal accidents, and 20 percent of drivers in less serious accidents, have a previous DWI arrest (Sterling-Smith 1976; U.S. DOT 1968). On the basis of these figures, I have estimated that, even if all persons arrested for DWI were prevented from ever combining drinking and driving again, fatal traffic accidents would decrease by only 2.4 percent and other traffic accidents would decrease by only 1 to 2 percent (Reed 1981). Of course, if the risk of arrest for drunk driving increased, so would the percentage of accident-involved drunk drivers with previous DWI arrests. Thus, increased risk of arrest would raise the potential savings from reducing DWI recidivism.

We are still left with the question of what is the best way to treat those arrested for DWI. Possible treatments fall into two categories. The first is punitive, involving treatments such as fines, imprisonment, license suspension and revocation, and license restriction (e.g., to allow driving only to and from work). Many "punitive" treatments are also prophylactic, in that they temporarily or permanently restrict the subject's opportunity to drive drunk again. The second category is educational and therapeutic

Continued on page 12

NHTSA Launches Comprehensive Effort To Address DWI

The National Highway Traffic Safety Administration (NHTSA) of the Department of Transportation (DOT) has launched a major new initiative to deal with the public health problem of traffic accidents, deaths, and injuries due to alcohol intoxication.

"Solving the drunk driver problem requires an integrated effort by all levels of government and society," according to NHTSA Alcohol Task Force head Clayton Hall. "But we must recognize that, in a real sense, drunk driving is first and foremost a local problem, not a Federal one. It has reached national importance because it is a significant problem in *every* community in this Nation. This distinction has more than rhetorical importance, because it is the local and community emphasis that is essential to any solution. The ultimate responsibility for solving this problem must be accepted at the local level, for it is in our cities, towns, and counties that the primary resources for controlling the drunk driver exist, society's attitudes toward drinking and driving are established and reinforced, and the tragic consequences of drunk driving are most acutely felt."

Through a program of countermeasure research and technical and financial support, the mission of NHTSA is to "stimulate and catalyze effective programs within the States." The goal of the NHTSA alcohol countermeasure program is to provide the States and their communities with the latest technology in solving the drinking driver problem, to catalyze the States and communities into action in an organized and systematic manner, to educate members of society as to the magnitude of the problem and possible solutions, and through these actions ultimately to significantly reduce the alcohol-related deaths, injuries, and property damage accidents in the United States. It is recognized that the achievement of this goal will be exceedingly difficult and will require a complex, long-term, and multidisciplinary effort, Hall notes.

"Solving the drunk driving problem requires a substantial investment in local and State resources over a sustained period of time," he says. "One-shot, short-term emphasis programs set up by special State or Federal appropriations will have a transitory effect at best. With the general trend toward shrinking State and Federal highway safety-related funding, year to year maintenance or operating budgets for key State agencies (police, courts, treatment, etc.) are being threatened or reduced. As in the ASAP projects, alternative sources of funding are available that would provide for sustained program operations." A prime source is the DWI offenders themselves, Hall suggests. "By redistributing offender fines, court costs, and education and treatment fees to the local governments—who pay for police, prosecutors, treatment, and so on—programs could be made financially self-sufficient. With a carefully designed financial management system, a State can also provide some funding for State-level program coordination (as does Virginia). A recently adopted New York statute now mandates the redistribution of all DWI fine revenue to the counties for DWI countermeasure programs. It is important to note that in these States, offender revenue is being employed to pay for the extra alcohol program efforts needed—not the entire operating budget of any local or State agency."

In the short term, general deterrence programs offer promise for the control of the present drinking driver population, Hall says. The NHTSA effort reflects the belief that in the long term, a societal norm must be established that makes drunk driving socially unacceptable behavior. "Achievement of such a goal, as widely divergent from the present social attitude as it is, will require decades of effort," Hall comments. "The focus for such an effort must be the pre-driver population— our youth. Through long-term prevention and education programs in schools and within communities, responsible attitudes toward alcohol use and driving must be established."

The NHTSA efforts will concentrate on:

- Providing technical assistance to States and communities to improve enforcement, prosecution, adjudication, public information and education efforts.
- Developing and conducting training for practitioners, police prosecutors, judges, etc.
- Providing seed money for drunk driving programs through the highway safety grant program.
- Developing and improving drunk driving countermeasures through research and development programs.
- Maintaining a clearinghouse of successful programs and techniques employed by other States, counties, and communities for combating drunk driving.

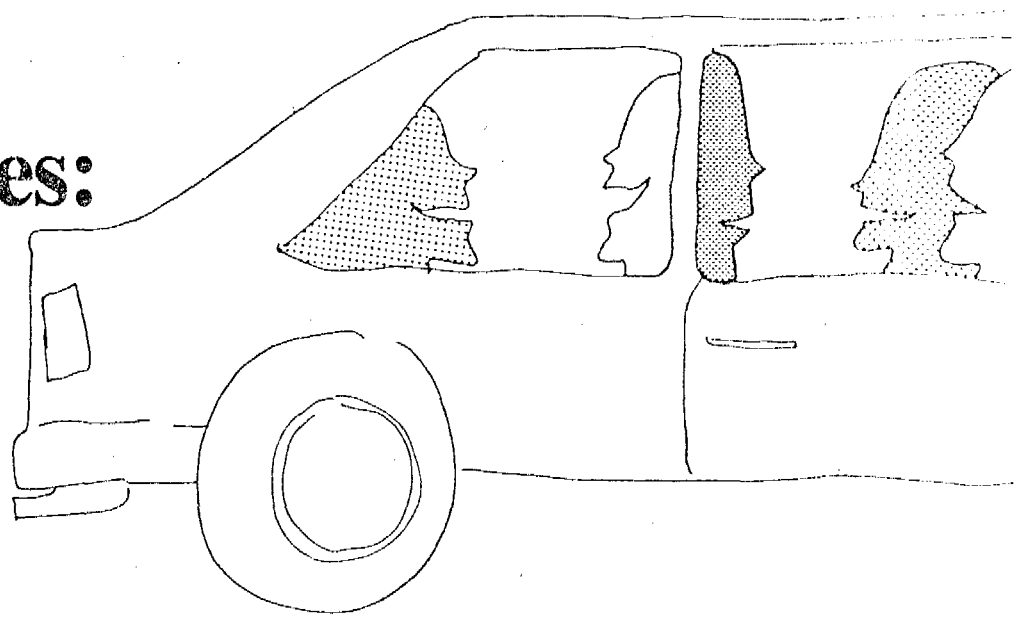
NHTSA officials stress that "even though drunk driving is a national problem, it can be solved only at the local level." □

—Jill Vejnoska
Staff Writer

FARS System

The Fatal Accident Reporting System (FARS) of the National Highway Traffic Safety Administration (NHTSA) since 1975 has collected data annually on all fatalities that occurred within 30 days of motor vehicle accidents on roads open to the public. The data are collected by FARS analysts in State agencies from a number of State sources (for example, police accident reports, death certificates, and emergency medical services reports). FARS findings provide program planners and other interested groups and individuals with objective data on the extent to which motor vehicle fatalities relate to alcohol use. □

Perspectives: An Interview Feature



This regular interview feature of Alcohol Health and Research World *features position statements on approaches to reducing drinking and driving from several of the many national groups active in the alcoholism and traffic safety fields.*

American Automobile Association

The American Automobile Association (AAA) believes that any comprehensive program to curtail driving while intoxicated (DWI) must include three approaches—*deterrence* through law enforcement and court action; *intervention* to identify and rehabilitate problem drinkers; and *prevention* through education in school grades kindergarten through 12, but also including continuing public education.

Public sentiment demands action on effective means available to curtail the DWI threat to our citizens. All reasonable efforts should be made to ensure that laws are enacted and administered to provide certain, consistent, and swift punishment. At the same time, we recognize that there are no panaceas for solving the drunk driving problem. Long-term improvement in the DWI problem will be achieved *only* if public attitudes change.

What is needed is a comprehensive, integrated approach—one that requires the talents of and cooperation among many citizens. Such a program would necessarily include:

- Reasonable laws that will encourage enforcement agencies to arrest DWIs, prosecutors to pursue the cases without plea bargaining to non-alcohol-related offenses, and judges to convict.
- Rehabilitation and reeducation programs with required attendance for all first-time DWI offenders as a supplement to other court actions, not as a substitute for them.
- Professional evaluations of and assignment to appropriate treatment for repeat DWI offenders until they are judged fit to return safely to the highways.
- License suspension—with provision for a restricted license to allow travel to and from work—for first-time DWI offenders. This approach will help deter social drinkers, yet not be so extreme as to hinder enforcement.
- Year-round public information and education programs to make drunk driving unacceptable social behavior and to promote greater community and citizen support.
- Alcohol and traffic safety education programs aimed at school-age youth (kindergarten through 12th grade).

• Evaluation procedures to assure effective operation of all elements of the program.

From testimony before the U.S. House of Representatives Subcommittee on Surface Transportation of the Committee on Public Works and Transportation, April 1982.

United States Brewers Association, Inc.

The United States Brewers Association, Inc. (USBA) and its member companies are deeply concerned with any misuse of our products and are supportive of sound, credible programs that encourage responsible decisions about the use of alcohol beverages. Of primary concern to the brewing industry are the health and safety of consumers and others with whom these people interact. One area of paramount interest to the USBA—and to all segments of American society—involves the issue of drunk driving and legislative initiatives that may assist in reducing its incidence.

To concretely redress the incidence of drunk driving requires the active participation of Federal, State, and local governments, as well as cooperation from the private sector, the judiciary, law enforcement officials, and the general public.

It is apparent that American society is resolved to remove the drunk driver from the highway, as has been demonstrated by President Reagan's appointment of a Commission on Drunk Driving, and the introduction into Congress of legislation to establish a national response to the problem. The USBA concurs with the proposed legislation's six major areas of emphasis:

• *General deterrence approach,* for short-term impact, via programs aimed at inhibiting the majority of drunk drivers who are never apprehended or convicted

• *Community focus,* with its emphasis at the local, community level

• *Systems approach,* which serves to integrate and coordinate enforcement, prosecution, adjudication, education and treatment, public information and education, and licensing functions at the State and local levels

• *Financial self-sufficiency,* which asserts that fines, court costs, treatment, and other fees ought to be borne by the convicted offenders

• *Citizen support* for comprehensive community programs

• *Long-term prevention education* programs aimed at changing societal attitudes toward drinking and driving.

Of utmost importance in reducing drinking and driving is the recognition that, while drunk driving is a national problem, it can best be solved at the State and local levels through development of comprehensive alcohol-traffic safety programs.

From testimony before the U.S. House of Representatives Subcommittee on Surface Transportation of the Committee on Public Works and Transportation, April 1982.

National Council on Alcoholism, Inc.

The National Council on Alcoholism's (NCA) views on drunk driving are based on their position that a significant portion of those arrested for drunk driving are alcoholic; that alcoholism is a chronic, progressive, and potentially fatal disease; that alcoholism is treatable; that treatment must be a part of any Federal, State, or local program to combat drunk driving; and that the imposition of punitive measures for drunk driving is not incompatible with the position that alcoholism is a disease.

"NCA recognizes that a significant portion of those arrested for drunk driving are alcoholic and problem drinkers and that we have a public responsibility in this difficult and complex area. We approach that responsibility through a variety of efforts at the National, State, and local level."

Such efforts include a "Memorandum of Understanding" with the U.S. Department of Transportation that is a formal structure to encourage cooperative efforts in designing programs to deal with the drunk driver. The NCA Board has also adopted guidelines for legislation on drunk driving that seek to assure adequate identification and treatment of individuals who are identified as alcoholic as the result of a drunk driving arrest. "These guidelines suggest that efforts recognize that some drinking drivers are suffering from the disease of alcoholism and that identification and treatment of this subgroup is critically important; that courts should have discretion to impose punitive measures or alternatives to mandatory sentences in appropriate circumstances; that any legislation that imposes penalties for drunk driving must also include provisions for alcoholism treatment; that education and rehabilitation programs include strong components for identifying, evaluating, and referring alcoholics or problem drinkers; that each governor designate an individual or agency to coordinate the State's alcohol traffic safety program, in conjunction with the State alcoholism authority, voluntary agencies, citizens groups, alcoholism treatment and prevention programs, in addition to transportation or motor vehicle agencies; that each State develop a program for training criminal justice personnel concerning alcoholism and alcohol-related problems; and that each State monitor compliance with drunk driving laws and include information on alcoholism in its public education campaigns and driver education programs." Finally, "NCA supports the prevention education campaign produced by NHAA to discourage young people from drinking and driving, and encourages the Department of Transportation to support the implementation of this excellent prevention program at both the State and National levels."

From testimony before the U.S. Senate Subcommittee on Surface Transportation of the Committee on Commerce, Science and Transportation, March 1982.

National Safety Council

The National Safety Council (NSC) urges jurisdictions and groups at present focusing on DWI laws and other legal approaches intended to reduce the numbers of alcohol-related deaths and injuries to consider the following recommendations:

• Increase the numbers of DWI offenders identified by improving enforcement. In particular, require that all drivers in moving violations or crashes be tested by a reliable breath alcohol screening device or some other chemical test for alcohol, and widely publicize these changes in

enforcement.

- Eliminate severe penalties such as jail sentences for first offenders, and *mandate* license suspension or revocation for fixed periods for all convictions for DWI.
- Assure that *all* arrests involving DWI be identified on driving records.
- Change the procedures by which offenders are processed to assure swift and certain adjudication.
- Disallow present alcohol treatment programs as an *alternative* to license suspension or revocation. (Such programs could be an *additional* mandatory requirement for repeat offenders.)
- Adopt a legal minimum drinking age of 21, if the present minimum is lower.

From a report of the Action Programs Subcommittee of the Committee on Alcohol and Drugs of the National Safety Council, February 1982.

Alcohol and Drug Problems Association of North America

The Alcohol and Drug Problems Association of North America (ADPA) feels that drunk driving is a much understudied issue and believes that it represents a major opportunity for the alcohol field to get people with alcohol problems into treatment. While ADPA has no official position at this time, the group advocates further study. The association is seeing signs that taking a punitive approach doesn't make sense, as it fails to reduce injury or death rates, but is encouraged by the results achieved by States that mandate treatment for DWI offenders who have alcohol problems.

From an interview with ADPA Executive Director Roger Stevenson, May 1982.

Distilled Spirits Council of the United States

The Distilled Spirits Council of the United States (DISCUS) has been an active participant in the traffic safety field for the past several decades. Based on our experience and our reading of the research over the years, the following points must be considered in the development of efforts to address the problem of drinking and driving.

Experience suggests the drunk driving problem will not in all likelihood be reduced through the enactment of severe penalties, although the public's perception of stepped-up enforcement and prompt adjudication of existing laws can have beneficial effects in reducing the incidence of drunk driving by normal adults and youthful drinkers. Regrettably, as the DOT-funded report by H. L. Ross indicates, most "get tough with drunk driving" programs have not been sustained.

One of the major prevention approaches that has been fostered over the years is to encourage normal adults—this does not include either alcoholics or teenagers—to know and stay safely within their personal limits if on occasion they may drive after drinking. The cornerstone of this effort involves our print moderation messages and the "Know Your Limits" program. In fostering these programs, DISCUS continually emphasizes that the safest policy is not to drive after drinking.

With regard to treatment and rehabilitation for repeatedly convicted offenders, we are aware from our experience and from the views of leading experts in the traffic safety field that there are several different populations involved in the drunk driving problem; each group requires a carefully tailored approach to prevention and treatment.

Community involvement is desirable to help spread the word that the law enforcement, courts, and health care systems mean business. Community groups, however, need to be aware of the history of various remedial approaches and to know what works and what doesn't. Community groups must have the benefit of the history of programs such as the Alcohol Safety Action Projects conducted in the seventies with DOT funds. In this way, all involved can help avoid reinventing the wheel, as John Volpe noted during his comments during a briefing held at DOT following his appointment as chairman of the Presidential Commission on Drunk Driving.

From an interview with and materials provided by DISCUS officials, May 1982. □

Facts and Findings

The peak incidence of single car crashes was found to occur at a younger age than was the peak blood alcohol concentration level, suggesting that some age-related factor aside from drinking is involved in such accidents (Rosenberg et al. 1974).

Note: Blood alcohol concentrations are not routinely tested following traffic accidents; in 1980, BAC tests were conducted on 36.6 percent of all drivers involved in fatal accidents in the U.S. It is not clear if those cases where BAC tests were conducted are representative of all such accidents (NHTSA 1981).

Drug Interactions

About 25 percent of drivers arrested for drunken driving had another drug (excluding marijuana) present in their bodies, with tranquilizers heading the list. One study found that 5 percent of fatally injured automobile drivers and 6 percent of fatally injured pedestrians had alcohol plus another drug in their body fluids (NIAAA 1978, p. 195).

Drugs that significantly increase driving risk include certain antianxiety agents, hypnotics, stimulants, hallucinogens, marijuana, lithium, and narcoleptic analgesics, as well as ganglionic blocking agents, insulin, and sulphonylurea derivatives. Anticholinergics, antihistamines, antidepressants, antipsychotics, phenylbutasone, indomethacine, alpha-methyldopa, and beta blockers may in some cases cause central nervous system side effects (such as drowsiness) strong enough to affect driving performance (Seppala et al. 1979).

In general, antianxiety drugs increase alcohol-induced impairment of psychomotor performance. However, there are quantitative differences in this effect even between different benzodiasepines. Genuine potentiation (synergism) of alcohol effect is rare (Seppala et al. 1979).

Alcohol has been shown to act synergistically with meprobamate (a minor tranquilizer) to depress performance tasks (NIAAA 1978, p. 200).

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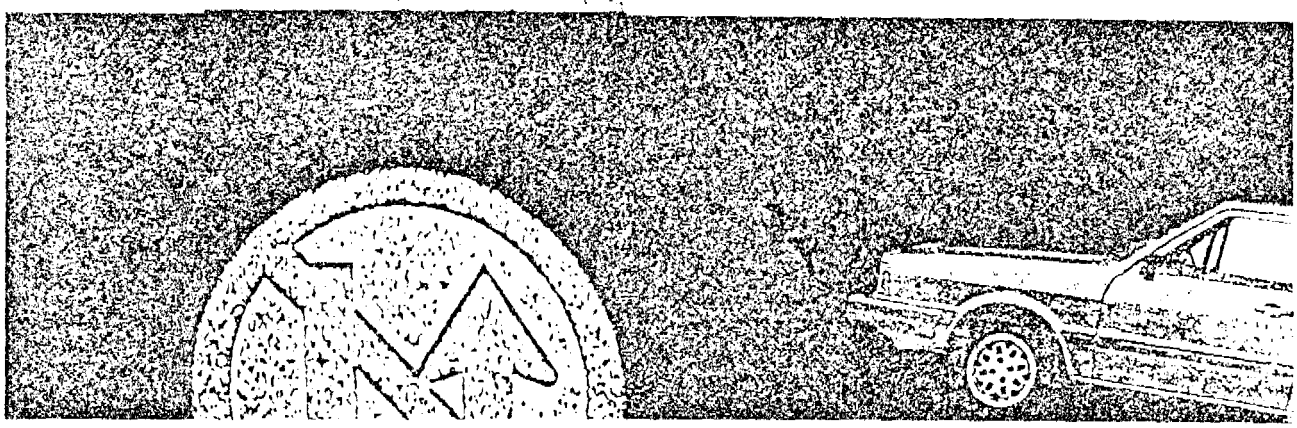

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treatments, including drinking-driver schools, group therapy, and treatment for general alcohol abuse.

Evaluations of programs employing the educational approach do not indicate that it is more effective than the generally cheaper punitive approach (see Reed 1981 for references). A record of poor past performance does not preclude future success, but the burden of proof seems to rest with advocates of a particular educational or therapeutic treatment program to show reason to believe that it will reduce recidivism more than the punitive approach.

Although an analysis of the treatment of general alcohol abuse is outside the scope of this paper, it should be noted that court referral of DWI offenders has become an important case-finding mechanism for alcoholism treatment programs. Persons thus referred tend to be younger, lighter drinkers, and to have suffered less disruption of their lives from alcohol abuse than others entering alcoholism treatment (Chatham and Batt 1979).

Third-party intervention. It seems reasonable to assume that a large fraction of drunk drivers, perhaps a majority, drink in the presence of other persons before driving. These "third parties," servers of alcohol and fellow guests or patrons, can take various steps to reduce drunk driving, including making it less convenient or less socially acceptable for a guest or patron to drink to intoxication, suggesting that intoxicated guests or patrons wait to sober up before driving or have a friend or taxi take them home, or physically restraining or reporting to police an intoxicated guest or patron who insists on driving. All of these steps impose some costs on the third party, such as time and unpleasantness. The problem is to convince third parties to bear these costs.

Public information and education campaigns have been used to try to increase third party intervention. These campaigns face the same difficulties as those attempting general deterrence; no truthful information that could be provided is likely to have much impact on a third party's perception of the risk inherent in drunk driving by others, since present perceptions appear to be fairly accurate. Moreover, a media campaign may not have sufficient persuasive force to alter social behavior that is reinforced by groups important to the individual.

The other way to convince third parties to intervene in potential drunk-driving situations is to impose legal liability on them. Twenty-eight States imposed on commercial servers of alcohol liability for damages caused by a patron who was under age or intoxicated when served (Mosher 1979). Unfortunately, the criteria by which liability is judged do not encourage servers to take precautions. Servers are liable whether or not they take precautions to avoid drunk driving by patrons. If there were accepted standards of practice for servers of alcohol, and if following these practices absolved the server of liability even if a patron "slipped through," drove drunk, and had an accident, then presumably servers would follow these practices to protect themselves and avoid high insurance costs.

Minimum drinking age. If people are prevented from drinking, then they are also prevented from driving drunk. A return to prohibition would be politically unfeasible even if it were desirable, but persons under a given age are routinely prohibited from purchasing or consuming alcohol. Throughout the United States, the minimum drinking age is set within the range from 18 to 21 years. It is probably unrealistic to consider setting a minimum drinking age outside this range, but the question remains of what value within the range is optimal.

It is clear from several studies that, when the drinking age is lowered to 18, the number of accidents involving 18-, 19-, and 20-year-old drivers increases (Douglass and Clark 1977; Organisation for Economic Co-operation and Development 1978, pp. 96-98; Comptroller General of the U.S. 1979, pp. 43-45; Haddon 1979, pp. 56-57; Scotch 1979, pp. 2-4). Various studies have found the percentage increase to range from undetectable to 26 percent.

The fact that prohibiting 18- to 20-year-olds from drinking reduces their accident involvement does not in itself make a convincing argument for setting the drinking age at 21. After all, prohibiting persons of any age group from drinking would probably reduce their accident involvement. On what basis can we decide that persons who are old enough to drive, vote, and enter into contracts may not have the same access to alcohol as all other adults?

Screening. A strategy that has received little attention is screening drivers to identify those most likely to drive drunk, and targeting countermeasures to them. In a pilot study for a proposed screening project in Washington, D.C., drivers renewing their licenses during 1976 were asked to take a widely used test to identify present or prospective alcohol problems. Many people considered the questions, some of which dealt with income, relationship with spouse, and arrest and drinking-driving history, to be too personal

for a motor vehicle licensing agency to ask.

Despite the fact that the test had been given on a voluntary and anonymous basis, press coverage, citizens' complaints, and protests by the American Civil Liberties Union led the mayor to suspend the project for further study and eventually to order the program aborted and all collected data destroyed (*Washington Post*, August 5, 1976, August 7, 1976, August 31, 1976, and December 22, 1976).

This points out a basic problem for screening programs. The screening device must use only information considered proper for licensing authorities to examine. In addition, it must produce a low level of erroneous positive identifications so as not to inconvenience or stigmatize persons who do not have drinking problems. A second problem is what to do with persons identified by the screening. If potential drunk drivers are identified, then the problem is the same as that of reducing recidivism (specific deterrence).

Detection devices in vehicles. The suggestion has been made that cars be equipped with devices that will detect an intoxicated driver and either prevent the car from starting or make it very conspicuous on the road, for example, by automatically flashing the headlights. Such a device could be installed in all cars or only in those driven by persons who seem likely to drive after drinking (e.g., persons with previous DWI convictions).

Although it is clear that any of the detection devices so far suggested can be defeated, they may still be of use since they require the driver to admit, to himself or herself and to anyone else whose aid has been enlisted, that he or she is too drunk to drive. It is not known how much potential drunk drivers' exposure to the road would be reduced if they and those around them were given unambiguous and immediate evidence that they were incapacitated.

The widespread installation of detection devices may meet hostile public reaction, since even those who never wish to drive drunk are likely to oppose the inconvenience and expense of having them in their cars. The inconvenience and expense would be more easily justified if detectors were installed only in the cars of persons with previous DWI convictions. One would expect such persons to have a greater likelihood of driving drunk in the future than do drivers in general, and indeed, empirical evidence suggests that this expectation is correct (Jones and Joscelyn 1978, p. 37).

Alternative transportation. To have an intoxicated person ride public transportation is safer for himself or

National Research Council Study Focuses on Prevention Policy Issues

The Panel on Alternative Policies Affecting the Prevention of Alcohol Abuse and Alcoholism concluded in its 1981 report, *Alcohol and Public Policy: Beyond the Shadow of Prohibition*, that "the regulation of supply, legal, and pedagogical approaches to drinking practices, and intervention in the environment mediating between drinking and certain of its consequences, represent valid approaches with promise for sustained improvement" in the control of alcohol problems, including drunk driving. The panel was convened by the National Research Council, which is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering, at the request of the National Institute on Alcohol Abuse and Alcoholism.

The panel found evidence that a number of measures may be useful in reducing drinking and driving. They found "good evidence from econometric studies that alcohol prices, as affected by excise taxation, can affect consumption levels, and probably the consequent rates of alcohol-related problems" such as cirrhosis and highway accident deaths. They also concurred that reducing the minimum drinking age had "resulted in an increase in the rate of auto crashes and fatalities involving youthful drivers."

The panel found "moderately persuasive evidence" that "effectively enforced drunken driving laws will deter drunken driving and reduce accidents and fatalities associated with it." They cautioned that "legal action does not just mean passing stiffer penalties," adding that "letting the public know police are bent on enforcing the law and increasing police surveillance of nighttime traffic patterns" are crucial but expensive elements in the law-enforcement strategy.

Despite the "checkered history" of education, information, and training in reducing alcohol problems, new developments in the field of health education show "sufficient promise . . . to warrant investment in experimental alcohol training," the panel wrote. They also called "passive restraint technologies [in automobiles] the most promising innovation" for making the human environment "safer for, and from, drunkenness and other impairments."

Each of these strategies—regulation of supply, legal action, education, and environmental intervention—for reducing alcohol problems "will fail or succeed only as it is implemented properly and thoroughly," the panel said. Their overall conclusions were that:

- "Alcohol problems are permanent, because drinking is an important and ineradicable part of this society and culture.
- "Alcohol problems tend to be so broadly felt and distributed as to be a general social problem, even though they are excessively prevalent in a relatively small fraction of the population.
- "The possibilities for reducing the problem by preventive measures are modest but real and should increase with experience; they should not be ignored because of ghosts from the past."

Alcohol and Public Policy: Beyond the Shadow of Prohibition, edited by Mark H. Moore and Dean R. Gerstein, is available at $15 per copy (reduced rate for bulk orders) from the National Academy Press, 2101 Constitution Avenue, N.W., Washington, DC 20418. □

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Facts and Findings

Diazepam (a minor tranquilizer) and alcohol in combination produce greater impairment of driving skills than does either drug alone (NIAAA 1978, p. 201; Seppala et al. 1979). However, this interaction is not linearly related to the doses of the two agents, and is strongest when a relatively small dose of alcohol (0.5g/kg) is ingested with diazepam. The interaction is also short lived (Seppala et al. 1979).

Chlordiazepoxide, N-desmethyldiazepam, and oxazepam (antianxiety drugs) show only a weak additive effect with alcohol on psychomotor performance (Seppala et al. 1979).

Several human studies indicate strongly, though not conclusively, that alcohol in combination with any of the major tranquilizers impairs the performance skills necessary in driving (NIAAA 1978, p. 201).

Few behavioral studies in humans have examined the combined effects of alcohol and antidepressant drugs (NIAAA 1978, p. 202). Imipramine, clomipramine, and nortiptyline are less likely than are amitripyline and mianserin to cause traffic hazards in drivers who drink (Seppala et al. 1979). It has been suggested that whether a tricyclic antidepressant is synergistic or antagonistic to alcohol depends on the ratio of sedative activity to stimulant activity of the drug (NIAAA 1978, p. 202).

Little work has been done on the interactions of alcohol with anticonvulsants (such as dilantin) frequently used to control convulsions in epilepsy; there seems to be disagreement about the effect of a dilantin-alcohol interaction in individuals with epilepsy (NIAAA 1978, p. 204).

Caffeine and amphetamines may have either antagonistic or synergistic action with alcohol, depending on whether alcohol is releasing inhibitions or exerting a depressant effect. Caffeine is at best only a weak antagonist of the depressant effects of alcohol and does not significantly improve driving performance in an intoxicated individual (NIAAA 1978, p. 203).

Although there have been few studies of the behavioral consequences of combining antihistamines and alcohol, behavioral research strongly suggests that antihistamines intensify the impairing effect of alcohol on performance skills (NIAAA 1978, p. 204).

Chloroform and ether (anesthetics) produce synergistic effects when combined with alcohol (NIAAA 1978, p. 204).

The combined effects of alcohol and marijuana are at least additive. However, some antagonism between alcohol and cannibis has been found in the time course of delayed glare recovery produced the two drugs (Seppala et al. 1979). Subjects given marijuana and alcohol in combination had significantly higher blood alcohol levels after 40 minutes than those who were given alcohol alone, suggesting that the psychoactive component of marijuana interferes with alcohol metabolism (NIAAA 1978, p. 206).

A review of the literature on drugs and driving (Joscelyn et al. 1979) concluded that existing information was not sufficient to determine the extent to which the use of drugs (alone or with alcohol) increases the risk of a traffic crash, the manner in which drugs alter human behavior to increase the risk of a traffic crash, the significance of experimental drug effects on behavior for performance on the driving task, or the significance of drug concentration in body fluids for levels of driving impairment.

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Citizen Activist Groups Affecting Public Policy on Drinking and Driving

Jill Vejnoska, Staff Writer

Increasingly, a wide range of citizens concerned about a problem that is an everyday occurrence in the country—driving while intoxicated— are taking action. Many are relatives of victims of traffic crises caused by a drinking driver. Others are mobilized by the realization that the consequences of driving while intoxicated are pervasive, affecting every member of every community.

Recently, citizens sharing a common concern about what Representative Michael Barnes (D- MD) calls "the senseless daily slaughter on our highways" have spearheaded an active movement to reduce the incidence of driving while intoxicated (DWI) in the United States. Meeting in suburban homes and church basements, gathering funds and supporters within their communities, and spending long hours observing State legislatures and courtrooms in action, they have given momentum to a grassroots citizen activist movement that has significantly increased public awareness of the problem and strengthened laws to deal with it.

With names like MADD, RID, and PARKIT, the citizen activist movement seems, at first glance, to be oriented toward an extreme position. But the objectives and activities of these groups address the broad range of issues related to reducing DWI incidents. According to Fran Helmstadter, coordinator of Prevent Alcohol-Related Killings in Tompkins (New York) County (PARKIT), "It took us about a year to overcome the public's perception of us as a vigilante or temperance group." Helmstadter lost her son and her husband in an accident caused by an intoxicated driver nearly 4 years ago. She believes that everyone plays a role in the high rate of alcohol-related accidents. She explains, "We're a part of the society that condones drunk driving."

PARKIT focuses its activities on changing society's attitude toward drinking and driving. Equating the general public's distaste for hearing "hard facts about drunk driving" with its reticence to discuss the possible ramifications of nuclear war, Helmstadter says, "The average citizen doesn't want to hear about the threat of nuclear war or that 50 percent of the population will be involved in a drunk driving accident, but these are things that have to be heard. Citizens have to pick up some responsibility for these hard subjects—that's what citizen activist groups are all about." Willan Van Dyke, national vice president of Mothers Against Drunk Driving (MADD), echoes Helmstadter's sentiments. Claiming that he is "a part of the generation that has given out the message that it's okay to drink and drive," Van Dyke says of MADD's efforts, "We're trying to show the public what we're doing to ourselves. We *have* to do that."

Many of the leaders of citizen activist groups have been personally affected by drunk driving tragedies. They have become involved in efforts to ensure that others do not suffer similar tragedies, recognizing the "good" that can be gained from their own tragedies in preventing further deaths or accidents. Cindi Lamb, who organized the Maryland chapter of MADD after her infant daughter Laura was rendered quadraplegic by an intoxicated driver, explains, "Laura used to have the strongest, sturdiest little legs. She was just beginning to crawl at the time of the accident. Now she can't move at all. But she can move people."

Remove the Intoxicated Driver

Not all activist groups are led by individuals who personally suffered from the consequences of a DWI incident. Doris Aiken, for example, founded Remove the Intoxicated Driver (RID) when two teenagers in her Schenectady, New York, community were killed by an intoxicated driver. But all are committed, like Cindi Lamb, to "moving people." Aiken, who presides over "the oldest and fastest growing citizen activist group in the Nation," with 60 chapters across the country and one forming in Canada, explains her commitment to reducing drunk driving. "In 1978, when these two young students, who were outstanding youths in our community, were killed, I read stories about them and their funerals, and saw pictures of them in the papers, but there was not a word written about the offender." Curious, Aiken says she contacted the local district attorney and "was politely invited to butt out."

Bolstered by a $50 contribution from her church and the help of friends and neighbors who were also concerned, Aiken set out to assess the DWI problem. What she found, after contacting the National Highway Traffic Safety Administration (NHTSA) and the NIAAA Clearinghouse, was that "the situation was the same all around the country. It was a national disgrace." Aiken and her acquaintances formed RID to bring public attention to changing this picture.

RID focuses mainly on DWI-related legislation—getting it passed and then ensuring that it is enforced. The approach is direct. For example, in 1979, when reform bills failed to get out of committee and onto the floor of the New York State legislature for the third straight year, Aiken says, "We told legislators that in 1980 these bills would pass or their positions would be reported in the media." The group followed up by preparing for each legislator an individual report card containing his or her voting record on DWI-related legislation, which was eventually released to the press. It has been an effective approach, she reports. In 1980, largely as a result of RID's activities, she says, four of the six DWI law reform bills introduced in the New York State legislature were passed. The new laws curtail plea bargaining in most instances, and provide for automatic license suspensions for convicted offenders. In addition, RID discovered previously untapped wells of support, Aiken says, describing the "instant recognition" accorded their legislative successes by the *New York Times* and the *Christian Science Monitor*. The bills received "overwhelming support" from the full legislature. "All those years, it had been one little

committee of legislators that had kept those bills off the floor, and added to the number of injuries and deaths," says Aiken.

Along with other citizen activist groups, RID is supporting passage of national legislation that would encourage States to establish comprehensive programs aimed at reducing DWI incidents. Aiken's group believes that such programs must raise the public's perception that intoxicated drivers are likely to be arrested and that punishment must be "swift, harsh, and evenhanded." The group advocates uniform enforcement and punishment policies in all States, along with "on line, statewide record-keeping systems accessible to police, the courts, and the public."

PARKIT

Like RID, PARKIT advocates strict consequences for intoxicated drivers who are convicted, and takes a similarly direct approach. PARKIT is a RID affiliate that chose to retain its name and its autonomy; PARKIT focuses mainly on the court system, rather than on the State legislature, working to ensure that the legislative reforms achieved by RID are enforced throughout the Tompkins County court system. Fran Helmstadter and co-coordinator Martha Ferger point out that the group also provides support to individuals who have experienced a family tragedy related to drunk driving. Recalling her own tragedy, Helmstadter says, "Right after the accident is when people need support." For Helmstadter, little assistance was available. To aid other victims, Helmstadter's friends and neighbors organized to study and correct this problem.

In order to ensure that the courts are dealing effectively with drivers charged with DWI, PARKIT established a "court-watching committee." Helmstadter explains that "we're not eager to point the finger at anyone, but we wanted to find out what the criminal justice wing does about this. We work with judges, telling them about new legislation, and we gently make them aware of other judges' conviction rates," Helmstadter says. Often, she explains, judges are uninformed about both of these areas. In addition, PARKIT traces driving while intoxicated and driving while alcohol impaired (DWAI) cases through the entire criminal justice system, checking their progress and ensuring that the judge is aware of any previous alcohol-related incidents in which the defendant may have been involved.

PARKIT works in other areas, distinct from adjudication, to meet the needs of drunk driving offenders, victims, and victims' families. Like all of the RID organizations, PARKIT also works for legislative reform. Describing their work in this area as "very important," Helmstadter says PARKIT members worked closely with State Senator Bill Smith to get New York State's "Stop DWI" bill passed. This law mandates minimum fines—$250 for DWAI and $350 for DWI—with one-half of the collected monies being returned to counties for use in drunk-driving-related activities.

On a more local level, PARKIT, working in conjunction with the county's district attorney, developed a program for identifying alcoholics among persons arrested for DWI. "Our local alcohol council does screening interviews to determine the extent of the driver's alcohol problem," Helmstadter says, "and if it is severe, he'll be directed to treatment." This program also assists in identifying first offenders whose motivation is high, Helmstadter continues. "There's a chance to do some alcohol education with them."

Mothers Against Drunk Driving

Alerting people to the potentially tragic consequences—for themselves and for others—when they drink and drive is a major function of Mothers Against Drunk Driving (MADD), a national citizen activist group with headquarters in California. According to Van Dyke, "The goals are the same in our 70 chapters across the Nation—what we're actually doing and working toward is education and public awareness." Van Dyke equates what MADD is attempting to do with the widespread education and awareness campaigns that are conducted periodically on the dangers of smoking. "It used to be that you could go to a party or a bar and light up a cigarette without getting a reaction from anybody," Van Dyke explains, "but now it's common to be asked 'Do you mind not smoking?'

Facts and Findings

Psychomotor Performance

Much research has been conducted on the influence of alcohol on vision. It indicates that vision per se is not greatly affected by alcohol at BACs of less than .10 percent, but at higher BACs vision becomes impaired in most persons. However, the ability to distinguish close but separate moving objects seems to be consistently impaired at much lower BACs, sometimes as low as .03 percent. Studies of the effect of alcohol on other modalities of vision show little or no impairment at low to moderate BACs, but increasing impairment at BACs above .08 percent (Jones and Joscelyn 1978, p. 24).

Simple sensory and motor functions appear relatively resistant to significant impairment by alcohol except at quite large doses (Moskowitz 1973).

Greater impairment of psychomotor ability has been found during the rising BAC period than during the falling BAC period. Differences in impairment were equivalent to changes in BAC levels of .01 to .02 percent. However, differences in performance due to past drinking practices were statistically more significant than differences in BAC level (Moskowitz et al. 1974).

Although it has often been stated that skill tasks that are well learned are more resistant to the effects of alcohol, a recent study found no difference in the effects of alcohol on tasks such as tracking and visual search as a function of differences in experience. It has been hypothesized that resistance to impairment may be associated only with highly overlearned tasks; this hypothesis is currently being investigated (Moskowitz, personal communication).

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That doesn't happen with drinking; if someone in a bar has had too much to drink, few people would say to him 'Would you please stop drinking?' or attempt to take his car keys away." Van Dyke says that "it's a matter of education. We want to get people to the point where they think about drinking and driving—what it might be doing to others and to themselves—and speak up about it."

Speaking up is something MADD does with regularity. Probably the most well known of the Nation's citizen activist groups, MADD was founded by Candy Lightner, a Fair Oaks, California, mother who "went public" with her outrage when the drinking driver of the car that killed her 13-year-old daughter was sentenced to 2 years in prison—despite several previous DWI convictions. MADD attracted much attention and publicity throughout the country when Lightner, Lamb, and others staged a Washington, D.C., demonstration. In California, MADD membes pressed Governor Jerry Brown to form a statewide task force on drunk driving. Their efforts were successful—the task force, with Candy Lightner as a member, was appointed. Most recently, Lightner has been named by President Reagan to serve on the Presidential Commission on Drunk Driving.

A California judge says, "Drunk driving was no big deal until MADD came along." It has become a big deal, he reports, mainly because the organization focuses attention on a previously overlooked group: the injured survivors of accidents caused by DWI and victims' families. According to Van Dyke, "One of the most important components is our Victim Outreach Program. We help victims—people who've lost relatives or friends because of drunk driving—to get through the adjudication process." Because for most victims "this is their first brush with the courts and they don't know what to do or expect," a MADD member accompanies them to arraignments, Van Dyke says, helps them research the driver's past record, and works with the victims and the local district attorney to assure that the offender is brought to trial. "We try to prepare them for the fact that basically, in this situation, the rights are on the side of the defendant," Van Dyke concludes. "In a sense, there's a bit of therapy involved in all this."

Prevention the Key

Van Dyke expresses an opinion shared by other citizen activist groups when he says, "We're not going to come up with some 'magic formula' for eliminating drunk driving." Aiken, Helmstadter, and Van Dyke all foresee a lengthy struggle to bring the problem under control. All are optimistic, however, that it is a problem that can be controlled. According to Van Dyke, MADD believes that the key to reducing drunk driving is "getting prevention efforts going and keeping them going." Again, he compares the driving while intoxicated problem with smoking: "You can sit in the nonsmoking section of an airplane, but you'll still be affected by others' smoke." Likewise, MADD believes that all citizens—even nondrinkers—are affected by drinking drivers, and therefore cannot ignore the problem. MADD sees its role as "keeping this issue in front of the American public until we see a reduction in drunk driving accidents and deaths," Van Dyke says.

At the same time, MADD advocates treatment of the drunk driver who is an alcoholic or alcohol-troubled individual. In this area, they look to professionals working the alcohol field to address the need for identification and rehabilitation of problem drinkers. Citizen activists "don't have the knowledge or the expertise to work with alcoholics or people with medical problems," Van Dyke says. MADD refers these people to professionals, often recommending that they attend Alcoholics Anonymous (AA). MADD also is working to inform physicians of the role they can play in identifying alcoholism, thus helping to reduce the Nation's DWI problem. "Here in California, there's a little-used law requiring physicians to report alcoholic patients to the department of health, which then passes the name on to the division of motor vehicles," Van Dyke explains. "We're pushing for greater exercise of that law." MADD believes that alcoholism and alcohol abuse are significant health problems requiring professional care, Van Dyke says.

Working With Alcoholism Caregivers

Like MADD, RID supports efforts to ensure that the drinking driver who needs medical care for an alcoholism problem gets treatment; but, president Doris Aiken explains, they are most concerned about the harm being done to innocent victims. "Alcoholics or people with alcohol problems *do* have real problems, and they need help," she maintains. "But we have to say, at some point, if they have been convicted for drunk driving, 'You can't have a driver's license.' " Mandatory license revocation for DWI or other alcohol-related traffic offenses is a goal that RID is actively pursuing, and one that they feel will not be achieved without the cooperation of alcoholism caregivers. "My strongest recommendation," Aiken says, "would be that citizen groups, legislators, and staff in the drunk driving schools work together to ensure that offenders do not drive until they have completed or almost completed the program. People write us all the time" reporting spouses or neighbors who have had their licenses revoked, but who continue to drive or refuse to attend drunk driving school, she reports.

According to Aiken, the experience of having to walk to DWI school or to be driven there by a relative "puts the proper learning climate in place." RID is advocating studies of the license revocation issue, conducted by professionals. "I'd like to see studies done by professionals, evaluating recidivism rates among people who receive conditional licenses while in drunk driving schools," Aiken says, compared with a control group of people who do not receive conditional licenses.

RID would also like to work more closely with alcoholism professionals in efforts to alter the media's portrayal of alcohol consumption. RID has joined with the Center for Science in the Public Interest to protest a Boston television station's decision to broadcast hard liquor ads during baseball games.

Like RID, PARRT is seeking to create a social climate that is conducive to reducing drinking and driving incidents, in cooperation with alcoholism caregivers. "The alcohol professionals can play a key role in creating a climate that supports citizen activist group efforts," Helmstadter says. "This includes giving information

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Legislative Approaches to Reducing DWI

Drunk driving has been one of the "hot" topics of legislative debate and action during the past year at both the State and the National levels.

"For too long, drunk driving has been socially acceptable and even condoned as part of America's 'macho' image," according to U.S. Senator Claiborne Pell (D-R.I.), one of the sponsors of legislation introduced in 1982 that would set uniform minimum penalties for first and subsequent DWI offenses and encourage States to develop comprehensive efforts to address the problem.

According to the National Safety Council (1982), 30 States and the District of Columbia have, in the first 3 months of 1982, introduced or enacted legislation intended to address the problem of drinking and driving. Much of the recent State legislation has concentrated on making it easier for police to enforce drunk driving laws, increasing the severity of legal sanctions and specifying mandatory penalties for various categories of offenses, and raising the minimum legal drinking age. In addition, legislation proposed or enacted in some States has dealt with rehabilitation programs for convicted offenders, often mandating rehabilitation or education for all first offenders in addition to legal sanctions. A few States have sought to develop laws requiring that violator's fines or separate fees be used to underwrite the cost of such programs. Several bills have sought to curtail the judicial system's use of plea bargaining (prosecuting the accused for a charge lesser than the original charge).

Enforcement and Sentencing Issues

Detecting and arresting drinking drivers before they are involved in an accident has been problematic for police. Statisticians report that, on a weekend night, 1 in 10 drivers is legally intoxicated, but only 1 in 2,000 drivers is arrested (NHTSA 1980-81). Generally a blood alcohol concentration (BAC) of .10 percent (roughly equivalent to four drinks for a 160-pound man in 1 hour) is the legal level at which a driver is considered to be operating a motor vehicle intoxicated. Since the BAC can be objectively determined, this establishes a means for providing conclusive evidence of intoxication.

Given this legal definition, the enforcement issues center on the police's ability to detect the intoxicated driver.

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freely, pointing us in a proper direction, and tempering our eagerness and enthusiasm with some hard facts and good advice." Helmstadter points to the relationship PARKIT has developed with a local police chief as a model for the potential partnership between citizen groups and the alcohol professionals. "He doesn't buy into all that we're doing, but he's there with advice and suggestions when we need it," she explains. "In a lot of instances, he knows what has and has not worked before, and he'll say, 'Why don't you do it this way?' We trust each other, and may or may not take each other's advice." A similar mutually beneficial alliance can be formed by citizen activist groups and professionals working in the alcohol field, she feels.

For example, PARKIT's attempts to convince local newspapers to print the names of persons convicted for DWI or DWAI have thus far been unsuccessful, Helmstadter says, "but I think that professionals could help us there." In addition, "professionals—and especially a national agency or organization—can support development of a climate that fosters efforts to uniformly raise the minimum drinking age," suggests Helmstadter. She feels that national legislation of this sort could have the same effect on reducing drinking and driving as lowering the speed limit to 55 MPH did on speed-related crashes.

Aiken and Helmstadter agree with Van Dyke that there is no simple solution to the drunk driving problem. "Over the long haul, changing people's behavior implies educating them," says Helmstadter. "But we can't put all our eggs in one basket. There are so many parts to the problem that we'll have to find *many* solutions." The relatively young groups, summarizes Van Dyke, are "doing well. We've made some progress. But we've got to stay on top of this."

For more information, contact Mothers Against Drunk Driving (MADD), 5330 Primrose, Suite 146, Fair Oaks, CA 95628; Prevent Alcohol Related Killings in Tompkins County (PARKIT), 10 Union Street, Dryden, NY 13053; or Remove the Intoxicated Driver (RID), P.O. Box 520, Schenectady, NY 12301. (RID's self-help manual *How Can I Help?* is available from this address for $1.) □

Guidebook on Citizen Action Available

For every one who has wondered "what can the average citizen do about drunk driving?," now there is a guidebook. Former journalist and citizen activist Sandy Golden has developed for the National Highway Traffic Safety Administration (NHTSA) a detailed guide titled *How to Save Lives and Reduce Injuries—A Citizen Activist Guide to Effectively Fighting Drunk Driving.*

The result of some 1,000 interviews conducted with citizen activists working in 20 States, the guide contains advice on what has helped to reduce the incidence of DWI. Warnings on what strategies to avoid—honest accounts of the mistakes some groups have made in dealing with government officials or the press—are also included.

According to its author, the manual provides useful suggestions about how to—

- Educate the public about the seriousness of the drunk driving problem in this country
- Strengthen State drunk driving laws
- Increase arrests for drunk driving
- Discourage social drinkers from drinking excessively and then driving
- Provide for more uniform prosecution and sentencing of drunk drivers
- Improve treatment and education programs for drunk drivers who are identified as alcoholics or problem drinkers
- Generate public support for further activity in the area of drunk driver control.

A section entitled "The Problem" clearly delineates the barriers facing citizen activists seeking to reduce drinking and driving, while another section entitled "The Solution" highlights a process for eliminating some of these barriers. Further on, the manual spells out in detail each step in this process—from lobbying a governor to establishing a State task force on drinking and driving, to increasing the arrest rate in a small community. The author writes, "We have to get the word out that we will no longer tolerate drunk driving in our communities, and mean it."

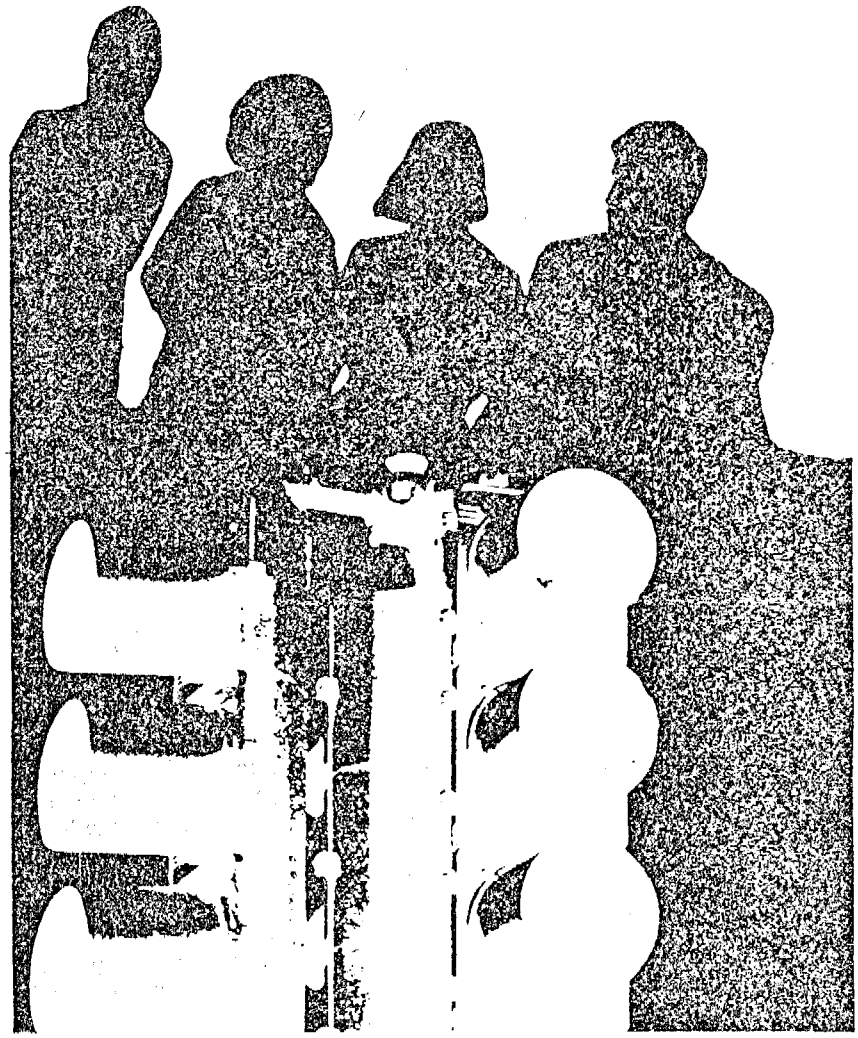
A detailed section on citizen activist groups describes the formative processes and recent successes of several of these organizations. A selection of newspaper and magazine clippings provides potential activists with insight into what constitutes successful organizing tactics. Also included are how-to pieces on organizing a citizen activist group, obtaining donations, organizing meetings, petitioning, and fundraising. In "Tools for the Activist," the potential of candlelight vigils, picketing, use of volunteers and student groups, and networking are discussed. "Just as a few people with the right tools can move a mountain," the manual suggests, so too can citizen activists use these tools to "unleash grass roots citizen power."

Other issues important to the success of citizen activism are examined in the NHTSA guide: effectively using the media, working with politicians to define common concerns about drunk driving, preparing and delivering testimony before legislative bodies, and monitoring police and court activities. By using this guide, the author says, citizen activists can "begin the concerted efforts necessary to get drunk drivers off our roads and provide better protection for the public."

For information on obtaining a copy of *How to Save Lives and Reduce Injuries—A Citizen Activist Guide to Effectively Fighting Drunk Driving*, write to Alcohol Task Force, National Highway Traffic Safety Administration (NHTSA), U.S. Department of Transportation, Washington, DC 20590. □

—Jill Vejnoska
Staff Writer

DWI Intervention: Reaching the Problem Drinker



A significant number of those arrested for driving while intoxicated (DWI) are problem drinkers, according to most estimates. The National Highway Traffic Safety Administration estimates that two-thirds of the alcohol-related traffic fatalities in the United States involve problem drinkers (NHTSA 1980-81). Joseph A. Pursch, medical director of Comprehensive Care Corporation, suggests that 50 percent of first-time DWI offenders, 70 percent of second-time offenders, and all third-time offenders are alcoholics (1981).

There seems to be general agreement among the diverse groups seeking to reduce the problem of driving while intoxicated that comprehensive efforts must include programs to educate, rehabilitate, or in some way intervene in the problem drinking among those who have alcohol problems. Such efforts have taken such diverse forms as DWI schools, alcoholism treatment, public information and awareness campaigns, alcohol education programs, license suspension, jail, probation, and confrontation by friends or family members; all have been viewed as forms of intervention when it comes to drunk driving.

The DWI problem has drawn a wide spectrum of society into the intervention process. Initial intervention in a drinking and driving situation is usually a function of law enforcement rather than of the health system. After the intial intervention, the judicial system may become involved, and depending on the community, a weekly education program may be next. In many cases, treatment for alcoholism is the final step in the intervention process for those with a serious alcohol problem.

DWI as a Health Problem

Recognition that a substantial proportion of those involved in drinking and driving incidents have drinking problems led to the development in the 1970s of widespread efforts to address the health aspects of DWI. The Alcohol Safety Action Project (ASAP) begun in 1971 by the National Highway Safety Bureau, now known as the National Highway Traffic Safety Administration (NHTSA), combined legal sanctions against DWI with health responses in a comprehensive approach. At demonstration sites located at first in 9 and later in 35 localities across the country, the ASAP approach was tested.

According to a recent report (NHTSA n.d.), "the basic strategy of the program was to combine the functions by which agencies of State and local government identify and apprehend drunk drivers, process them through the courts, obtain a diagnosis of their alcohol dependency, and arrange for their treatment, education, and penalties.

"In each of the projects there were special alcohol enforcement squads to detect and arrest drunk drivers. Others received special training and equipment and concentrated their efforts at the times and places where alcohol-related crashes occur. The courts streamlined procedures to efficiently process large caseloads. Probation authorities developed case screening and treatment and referral techniques to determine each individual's level of alcohol problem, and to select the most appropriate treatment agency where he or she could get help. Health care agencies introduced rehabilitation programs and alcohol safety schools as alternative sanctions to go beyond the traditional penalties previously available to judges."

Results concerning the overall impact of ASAP programs are conflicting. The ASAP program in the aggregate has yet to be proved an effective countermeasure in reducing traffic

casualties (Jones and Joscelyn 1978). However, some individual programs did achieve positive results in reducing fatalities and rates of recidivism as well as in promoting responsible driving (Cameron 1979). In one report, NHTSA concluded that ASAP driver education schools had effected increases in knowledge and positive changes, but that "there was not much convincing evidence to indicate that such schools were causing a decrease in arrest or crash involvement for clients exposed to them" (Jones and Joscelyn 1978). Another study (NHTSA n.d.) indicated, however, that, while programs designed by ASAP to reach the problem drinker or alcoholic were not found to have any short-term effects on recidivism, social drinkers who attended alcohol safety school did have fewer subsequent arrests for DWI.

The ASAP projects, in creating a mechanism for providing DWI offenders with alcohol information and, as appropriate, referral for treatment, introduced a new case finding mechanism for the alcoholism field, one that appears to offer the potential for early intervention in drinking problems. Roughly one-quarter of a million drivers were referred to education and treatment programs during the course of the ASAP demonstration programs. In addition, creation of the DWI schools caused major changes in the adjudication of DWI cases (NHTSA n.d.). Courts greatly increased the use of presentence investigations, probation, referrals to rehabilitation, and standardized plea bargaining procedures. Court mandated referral of offenders to education and rehabilitation programs were associated with increased numbers of clients completing rehabilitation programs, increased numbers of offenders processed through the court system, and increased arrest rates.

DWI schools. According to one

DWI Intervention Unique Among Social Controls

"Drinking and driving intervention is in unique contrast to the moves toward decriminalization of public drunkenness and the expansion of nonpunitive responses to other alcohol problems," an international body of researchers concludes in the report *Alcohol, Society, and the State.* The report is a product of a 5-year study analyzing the social history of the postwar alcohol experience in Finland, Ireland, the Netherlands, Poland, Switzerland, Ontario, and California.

The participants, designating themselves the International Study of Alcohol Control Experiences (ISACE), prepared comparable case descriptions of the trends in alcohol consumption, alcohol-related problems, and alcohol control systems from 1950 to 1975 in their geographic areas. The study, detailed in the recently released two-volume report, traces the historical development of alcohol control policy, its determinants, and its effects on the levels of alcohol consumption in the various societies, and assesses the potential influence of control policy on the consumption of alcohol and its adverse consequences.

One volume of the report consists of case studies of their own societies prepared by participants from each of the seven countries. The other volume contains a collaborative international analysis. One chapter of this report examines the data on trends in the seven societies in the occurrence of alcohol-related problems and in the societal handling of alcohol problems, including a discussion of drunk driving.

Because the definition of drunk driving varies from country to country, as do reporting, investigating, and enforcement practices, the ISACE researchers did not attempt to make meaningful comparisons *across* countries. "Our main interest," they wrote, "is in the rate of change in alcohol-related road incidents in each society in comparison with other indicators of traffic safety." They found in four of the five areas for which data were available that there was a greater increase in alcohol-related traffic accidents than in all other types of accidents during the period studied. As traffic congestion increased, the overall number of fatal or personal injury accidents decreased, but alcohol-related accidents increased. In addition, the proportion of *serious* traffic accidents that were alcohol-related continued to increase, leading the ISACE group to conclude, "While road traffic safety is increasing, alcohol-related traffic safety is not."

The researchers maintained that patterns of alcohol-related traffic accidents are influenced by at least three factors:

- Visibility of drunk driving as a social problem, as the amount of traffic increases and the general accident rate declines
- Emphasis on alcohol's role in traffic problems, as social concern for the problem grows and law enforcement and reporting practices change
- Actual increases in the prevalence of drinking and driving, resulting from increased alcohol consumption and diversification of drinking patterns and styles

Finally, the ISACE researchers noted that problems related to drinking and driving have become "objectively more significant in the study period" than any other consequence of single-drinking occasions. Furthermore, they observed that "concern about alcohol and traffic accidents has widened the definition of problem drinkers to more than just public inebriates or those under care for alcohol problems."

The report was published by the Addiction Research Foundation, 33 Russell Street, Toronto, Ontario M5S 2S1. □

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study (NHTSA 1975), more than 70 percent of the nearly 49,000 persons who entered rehabilitation programs at 26 ASAP sites in 1973 attended DWI schools. Most of the DWI schools have followed an educational approach based on the archetypal Phoenix course begun in 1966. The course has served as a prototype for more than 400 programs in the United States and Canada (Malfetti and Simon 1974). It is estimated that between 1966 and 1973, more than 15,000 people convicted of DWI attended the course in one form or another.

The basic Phoenix course consisted of four sessions at weekly intervals, each session lasting about 2½ hours. The sessions included informally structured discussion, films, reading, and oral and written exercises requiring self-analysis. Each session was conducted by an instructor and attended by probation officers and counselors with special training in alcoholism. A magistrate attended the first session only and described the relationship between the court system and the course. The counselors were present to assist with referrals to community treatment agencies.

Problem drinking driver programs. In the early 1970s, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) funded 18 Problem Drinking Driver Programs (PDDPs), which extended the treatment and rehabilitation programs for alcoholics and problem drinkers in support of the ASAPs. Most of the PDDPs were affiliated with an agency such as a community mental health center, a department of mental health, or other government agency. The projects also varied in facilities and types of services offered. For example, all PDDPs provided outpatient services, such as counseling or therapy; some also had emergency detoxification, inpatient treatment, or medical maintenance.

An evaluation (NIAAA 1976) later concluded that "although the PDDPs are quite diverse in organizational structure and geographic location . . . (the) treatment and rehabilitation does effect a positive change in client drinking patterns and behavior as measured in various ways at intake and 6 months after intake. This is accomplished at a relatively low cost per client—$225 on the average for those who complete treatment."

Screening issues. Differentiating between problem drinkers or alcoholics and nonproblem drinkers involved in DWI offenses is important in tailoring education and rehabilitation programs appropriately. Researchers have looked at the way problem drinkers were referred in ASAPs versus the process for social drinkers (NHTSA 1975). Of the more than 30,000 who attended DWI schools at 26 ASAP sites, 27 percent were classified as "problem drinkers" and 45 percent were listed as "social drinkers." The study concluded that the problem drinkers were referred to DWI schools less frequently and to other modes of treatment more frequently than were other categories of drinkers. However, 46 percent of problem drinkers entered DWI schools, the report said, and 59 percent entered one or more other treatment modes.

A recent report by the Governor's Alcohol and Traffic Safety Task Force in New York (n.d.) addressed this issue of differentiating between problem drinkers and nonproblem drinkers and called for changes in the ways that arrested individuals are screened for education or treatment. In New York, screening for problem drinking is conducted during the Drinking Driver Program (DDP), a series of seven sessions totaling 16 classroom hours of learning and discussion pertaining to self-analyses of drinking and driving behavior. The screening process places drivers into one of three categories: level one (social drinkers), level two (heavy drinkers), or level three (problem drinkers). The Task Force differentiates between these categories by stating that "the latter two levels require more intensive rehabilitation efforts than the education programs such as DDP to which level 1 drinking drivers respond favorably," and recommending that level 1 drivers be referred to the DDP and level 2 and 3 drivers "be referred to a Division of Alcoholism and Alcohol Abuse certified treatment agency prior to any license reissuance." The treatment and education sessions are then tailored to the needs of group members, and participants who may require more intensive rehabilitation are referred for evaluation and treatment.

In the future, the task force suggested, drivers should be screened "as close in point of time to the alcohol-related incident as possible. This earlier screening will allow clients to be matched to the appropriate rehabilitative modality almost immediately. Treatment staff will also be able to build upon an individual's initial receptivity to rehabilitation and, consequently, be more responsive to each individual's needs." The task force also called for a demonstration project to be developed that would "test the concept that early screening, prior to program entry, is a more effective rehabilitation and deterrent instrument than the current process."

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Some State legislatures have introduced bills to allow police to set up random roadblocks, testing all drivers for BAC (NSC 1982). As of May 1979, 12 States had enacted laws that specify that a driver with a certain BAC, most often .10 percent, can be arrested on the basis of a breath test alone (NHTSA 1980-81). Such "illegal per se" laws are under consideration by a growing number of States.

Another issue that is addressed in legislative debate is the legal requirement that drivers submit to a breath test to determine BAC. As of May 1979, 13 States required drivers to submit to a preliminary breath test (NHTSA 1980-81). Some legislatures are proposing or enacting "implied consent" provisions that require drivers to, as a prerequisite to receiving a driver's license, sign an agreement to submit to a roadside test (given with an approved chemical breath analysis device) to determine their level of intoxication (NSC 1982).

Stiffer Penalties for Offenders

State legislatures are also debating and enacting provisions that specify stiffer penalties—higher fines, mandatory jail terms, and license revocation—as well as provisions that restrict individual options in sentencing offenders—plea bargaining controls and mandatory participation in a drug/alcohol education or rehabilitation program (NSC 1982). States, though diverse in their approaches, usually specify a combination of consequences for DWI, with the severity increasing as the number of offenses increase. However, laws vary considerably. According to a recent survey by Associated Press, in Kentucky and Virginia, the maximum penalty for DWI is a $500 fine and a 6-month license suspension, and a first offender cannot be sent to jail. On the other hand, Massachusetts' maximum penalty for DWI is 2 years in jail, followed by 1 year of probation, a 2-year license suspension, and a $5,000 fine. Wisconsin first offenders face a maximum 6-month license suspension, a $300 fine, and no jail term.

Maine has recently cracked down on drunk drivers by setting minimum penalties of at least 2 days in jail, a minimum of $350 in fines, and a 90-day suspension for those convicted of a criminal offense; at least $250 in fines and a 45-day license suspension is mandated for civil charges. Although other States have what is called "mandatory minimum sentences"—a day of jail in Arizona and Washington, 2 days in jail in California and Iowa, 3 days in Ohio, and 10 days in Oklahoma—there has been concern that prosecutors and judges routinely negotiate plea bargains to lesser charges and substitute attendance at alcohol education classes for jail time.

Some States are seeking to limit plea bargaining options, based on information from the NSC (1982). For example, recent California legislation restricts judicial discretion. If an arrested DWI offender manages to plea bargain, getting a DWI charge downgraded to reckless driving, the offender's record must note that alcohol was a factor in the arrest. Consequently, the next drunk driving arrest will result in second offense penalties. In New York, new legislation prohibits a plea bargain in a drunk driving case that results in a plea of guilty to a lesser non-alcohol-related traffic violation, unless the district attorney finds that the alcohol-related charge was unwarranted.

Concern that this approach will reduce DWI convictions, however, has also been raised. In some cases, for instance, especially where the illegal per se law permits prosecution based on a roadside breath test, it is difficult to win a jury conviction if the BAC is only slightly over .10 percent, prosecutors say.

In many States, judges have the leeway to require an offender to attend a DWI education or alcoholism rehabilitation program. The concern that such alternatives allow the offender to "escape" the legal sanctions has led some legislators to draw up bills requiring that both rehabilitation or education and legal sanctions be imposed for first offenders (NSC 1982). However, most court-referred DWI offenders continue to follow the traditional model—attending DWI classes or alcoholism treatment as a condition of probation. This arrangement ensures that, if the DWI offender fails to attend sessions as required, the legal penalties will be imposed, and at the same time provides the "coercion" sometimes necessary to get the problem drinker involved in rehabilitation and counseling.

Minimum Drinking Age Raised

Increasingly, State legislatures are considering raising the minimum legal drinking age as a means of reducing drunk driving and alcohol related accidents among youths. As of April 1981, 24 States had set 21 as the minimum age to legally buy at least one type of alcoholic beverage; 15 States raised the minimum age between 1976 and 1981, and similar changes are being considered in other States (Wagenaar 1981/82).

While researchers caution that statistics on the impact that lowered minimum drinking ages have on increasing alcohol-related accidents are not conclusive, there have been several recent evaluations of the effects of raising the drinking age on reducing alcohol-related crashes among youth. In two other NIAAA-funded studies, researchers looked at the impact of raising the legal minimum drinking age on fatal and nonfatal traffic accidents. In one study, which examined the effect of higher minimum drinking ages on fatal crash involvement in nine States, Williams and associates (1981), from the Insurance Institute for Highway Safety, found a 28 percent reduction in nighttime fatal crash involvement among those to whom the law applied.

The researchers estimated that in the States that had raised their drinking age, about 380 fewer teenage drivers were involved in fatal nighttime crashes, especially in the types in which alcohol is most often involved. Further, the study pointed out that, in the States that still had a minimum drinking age below 21 (as of that date), an estimated 730 teenage lives could have been saved if the legal drinking age were 21.

Hingson and associates (1981), from the Boston University School of Public Health, compared similar variables in Massachusetts (which raised its drinking age to 20 in 1979) and upstate New York (with a minimum drinking age of 18). They found no significant differences beyond the first month following the Massachusetts change. According to Hingson, the proportion of fatal accidents *did* drop significantly during the first month. However, there were no significant overall changes in the proportion of surveyed

teenagers who drank, volume of consumption, frequency of driving after drinking heavily, or accidents per teenage driver in Massachusetts, as compared with New York. The researchers did note that, while the number of Massachusetts teenagers purchasing liquor in bars and liquor stores declined during the survey period (1979-1980), the number of those who had someone else buy alcohol for them increased in Massachusetts.

In another area of the same survey, police officers who endorsed the higher drinking age admitted that variables like increased public drinking and vandalism (because teenagers could no longer drink in bars), understaffing on the police force, competing enforcement priorities, and inappropriate penalties posed substantial law enforcement problems. In addition, the officers surveyed suggested that, although the higher drinking age may change the patterns of offenses, it was doubtful that it would change levels of drinking.

A study funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and conducted by the University of Michigan Highway Safety Research Institute indicates that raising the legal minimum drinking age in Michigan and Maine during the late 1970s "reduced number of alcohol-related traffic crashes involving young drivers" (Wagenaar 1981). The study looked at 8 years (1972-1979) of traffic crash data for four States--Michigan, Maine, New York, and Pennsylvania—and examined, through a multiple-time-series design, "the effects of a raised minimum drinking age, including whether such legal changes have differing effects on crashes of varying severities."

Michigan had raised its minimum age to 21 in December 1978 and Maine had raised its drinking age to 20 in October 1977; New York (minimum drinking age 18) and Pennsylvania (age 21) were controls. The study found that in Michigan the higher drinking age resulted in a 17 percent reduction in less serious property damage alcohol-related crashes and a 20 percent reduction in alcohol-related personal injury crashes among 18- to 20-year-old drivers.

Beyond Legislation

Although there has been much legislative activity designed to deter individuals from combining alcohol and driving, there is widespread agreement that legislative remedies alone cannot effect a significant reduction in drunk driving. In addition to the concerns addressed by the new and proposed laws, many States are seeking to increase public awareness of the consequences of DWI—to mount alcohol education efforts in the schools, to develop special training for police officers, and to tailor rehabilitation and education for those convicted of DWI offenses.

There is also recognition of the need to address such inter-State issues as what can be done to stop drivers whose licenses are revoked or suspended in one State from driving in another, and how States can develop and enforce uniform efforts to deal with drunk driving and to control youths' access to alcoholic beverages.

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One of the main effects of alcohol appears to be an interference with the information processing or time-sharing aspects of the driving task (Clayton 1980; Linnoila 1974; Moskowitz 1973).

Note: The lack of a clear connection between laboratory behavior and driving tasks seriously limits the usefulness of laboratory studies of the effects of alcohol on human behavior. However, such data are useful in pointing toward areas of concern.

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Prevention and Deterrence

The International Experience

H. Laurence Ross, Ph.D.

Editor's Note: This article is adapted from a report, Deterrence of the Drinking Driver: An International Survey, *prepared by H. Laurence Ross under contract to the U.S. Department of Transportation, National Highway Traffic Safety Administration, published in 1981. The full report is available at a cost of $12.50 from National Technical Information Service, Springfield, Virginia 22161. In addition, the report has been substantially revised and expanded in a recently published book written by Ross. Deterring the Drinking Driver: Legal Policy and Social Control is available from Lexington Books, 125 Spring Street, Lexington, Massachusetts, at a cost of $22.95.*

The past hundred years may well be termed the century of the automobile. The automobile surely merits consideration among those inventions that have revolutionized world history, changing the physical and social dimensions of human existence, modifying preexisting bases of everyday life, and opening a Pandora's box of associated social problems.

It is evident that drinking and driving has emerged as a major correlate, and very likely a major cause, of automobile crashes, especially the more serious and damaging ones. From the earliest perceptions of this link, policymakers have attempted to control drinking driving by deterrence through law. The last half-century has found governments everywhere espousing "Scandinavian-type" laws, designed to maximize deterrent effectiveness by following a model originally developed before World War II in the Scandinavian countries. These laws contain provisions to increase the apparent certainty, severity, and celerity of penalties for drinking and driving.

Although the effectiveness of the original Scandinavian laws on drinking and driving has not been adequately demonstrated, the introduction of similar laws in other countries in recent years has often been accompanied by informative evaluations, especially in the last decade. The major lesson of this research may well be that, in the area of drinking and driving, general deterrence does work. That is, experience has shown that significantly increasing the threat of punishment for drinking and driving brings about notable and measurable declines in associated crashes. However, it is equally important to note that in no case does the accomplishment of deterrence seem to have been permanent. Where the increased threat has taken the form of an enforcement campaign, with an intended beginning and end, effects beyond the termination of the campaign have rarely been noted. Where the increased threat has taken the form of a permanent change in the law, subsequent events have revealed a gradual return of the drinking-driving problem to the preexisting level.

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The Problem of Drinking and Driving

Alcohol's contribution to traffic crashes has been recognized for many decades. The nature and extent of this contribution was initially only vaguely understood, however, and both popular and legal views of the problem centered on the grossly intoxicated driver. This conception supported laws that prohibited driving while "under the influence of intoxicating liquor," driving in an "intoxicated condition," or just plain "drunk" driving (Fisher and Reeder 1974, p. 173). These laws, which I call "classical," aimed their proscriptions at clearly blameworthy conduct. Both penalties and procedures were drawn from the criminal law and seemed to be appropriate to the behavior in question. However, the shifting definitions of the object of sanction during the classical period suggest that even in the case of grossly impaired drivers there were problems in obtaining convictions when the impairment did not result in a crash (Force 1977).

Deterrence is but one among several goals of the criminal law system, the others being retribution, rehabilitation, and incapacitation. Retribution may not appear to be a constructive approach to social problems, but it may be that examples of punishment for deviant behavior will provide illustrations of the *normative* boundaries for behavior (Erikson 1966), that is, it may be necessary to take punitive measures against individuals apprehended for drinking and driving in order to prevent it from occurring among society as a whole. Rehabilitation and incapacitation are also classic goals of the criminal law system and are a part of the legal approach to drinking and driving. Rehabilitation refers to measures such as education and treatment applied to offenders with the intent of modifying their behavior in the future. The success of rehabilitation is in part determined by the recidivism rate of clients based either on additional convictions for deviant behavior or self-reports of formally undiscovered behavior. While research concerning rehabilitation among violators of traditional criminal laws has led to the general conclusion that few if any programs produce the intended improvements, pessimism may be premature in the area of drinking and driving, where legal actors in this area are strongly motivated to accomplish rehabilitation. Incapacitation is achieved through legal sanctions that restrict the violator's ability to commit new violations, even though he or she might wish to do so. The classic example is imprisonment, which eliminates recidivism for a period of time by physically constraining

the offender. Incapacitation may occur for drinking drivers by means short of imprisonment, although these may act imperfectly. License suspension represents an attempt at incapacitation, as would the seizure of vehicles owned by the drinking driver.

This article is concerned with general deterrence, which, by threatening punishment, attempts to influence people to refrain from prohibited acts and avoid legal consequences. This can be contrasted with specific or individual deterrence, which punishes offenders to make them more sensitive to the consequences of continued prohibited behavior. General deterrence is based on a threat that has not been directly experienced.

The deterrence model has its origin in the speculations of Beccaria, Feuerbach, and the English Utilitarians. Briefly stated, it proposes that the efficacy of the legal threat is a function of the perceived certainty, severity, and celerity of punishment in the event of a law violation. The greater the perceived likelihood of apprehension, prosecution, conviction, and punishment, the more severe the perceived eventual penalty; likewise the quicker this penalty is seen as being administered, the greater will be the effect of the legal threat.

The social science literature raises several specific questions concerning the conditions of deterrent effectiveness (Grasmick and Green 1980). For instance, to what degree are the three independent variables of the model—perceived certainty, severity, and celerity of punishment—interactive? Does severity of penalty influence people's behavior only when there is relative certainty of apprehension and conviction? Because of the rarity of drinking-driving convictions, this is a highly relevant question. Also, is the model itself interactive with other social control variables, such as peer-group pressures and internalized standards for behavior? This raises the important issue of the need for popular support for drinking and driving laws. Is deterrence dependent upon social and psychological characteristics of the potential violator, e.g., rational decisionmaking or instrumental motivation? (Chambliss 1966; Zimring and Hawkins 1973). The sometime characterization of the drinking driver as a problem drinker is questioned here. Finally, what relationship exists between objective and perceptual views of the certainty, severity, and celerity of punishment, and what effect does this have on the deterrence model? (Gibbs 1975). This question points to the necessity of studying the drinking-driving law in action as well as the formal law (Ross 1970).

The Scandinavian Model

In the early years of the century of the automobile all attempts to use law to control crashes related to drinking and driving followed the model that I have termed "classical." A major change in these laws took place before World War II in Norway and Sweden, resulting in a legal approach to drinking and driving that I term the "Scandinavian model." After a delay of more than two decades, the Scandinavian model began to be adopted outside the original countries, and within the last few years it has come to mark the legislation of virtually all nations with significant automobile populations.

Classical laws were not well formulated to present sure threats of swift, severe punishment for hazardous drinking and driving. Perhaps their major defect was in failing to persuade the populace that punishment would be at all certain.

In 1936, the Norwegian Parliament established a new type of drinking-and-driving law that, with minor modifications, remains in force to this day. Compared with classical law, the Norwegian legislation appears to conform more with the principles of deterrence. The most radical change of the new law was to define the culpable act as driving while possessing a blood alcohol level in excess of 50 milligrams per 100 milliliters of blood (.05 percent w./v.). In addition, the need to define and prove that a driver was "drunk" or "under the influence" of alcohol was eliminated. By itself, the redefinition of the offense would not be expected to affect apprehension, but the resultant simplification of conviction for those charged would increase the certainty of punishment. However, the practice by Norwegian police of verifying driver's licenses and insurance papers in "random" roadblocks, coupled with the availability of breath test

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devices in the event of the odor of alcoholic beverages, might have been expected also to increase the risk of apprehension for the drinking driver.

Sweden introduced fixed blood alcohol criteria for drinking and driving a few years after Norway, in 1941. The Swedish law differed primarily in that it established two levels of violation: between 80 and 149 mg/100 ml, and 150 mg and over, with different levels of punishment. Although the Swedish prohibition covered a smaller sector of the alcohol-involvement scale, it was designed to produce the same effect on the more limited population being addressed. Today, with the exception of a lower lesser offense limit of 50 mg, the Swedish law remains basically the same. However, the perceived certainty of punishment may have been increased by rules passed in 1976 that permit police to demand, without restriction, breath tests for blood alcohol at scheduled roadblocks, crashes, and in connection with certain traffic violations.

The redefinition of the drinking-and-driving offense was accomplished in both Sweden and Norway in the context of prior statutes prescribing relatively severe punishments for drinking and driving. Thus the Scandinavian model is characterized by severity as well as relative certainty. In Sweden, the penalty (absent very rare extenuating circumstances) is imprisonment for the more serious offense and heavy fines for the less serious, and license revocation applies to both offenses from the level of 80 mg (0.08 percent w./v. in U.S. notation) upward. Imprisonment and license suspension routinely apply to the single-level Norwegian offense. No information is reported on the celerity of punishment in Norway and Sweden. However, prompt administrative action to suspend the driver's license—either done on the spot by the police or within a few days by administrative agents—is very much a part of the Scandinavian model.

Effectiveness of the Scandinavian model. Although the laws of Norway and Sweden created the model that has recently swept the Western world, there is no scientifically valid evidence to date of the deterrent effectiveness of these laws in their home countries.

Perhaps the most commonly heard evidence supporting the deterrent effectiveness of the Scandinavian laws is testimony from residents and visitors based on observation. People are said to be aware of the law and to fear its threat, and much of this testimony concerns parties at which great quantities of liquor are consumed by all present except the driver. Although one hesitates to doubt the anecdotes, they provide no scientifically acceptable evidence for the proposition they illustrate. Andenaes, one of the strongest (and most reasonable) proponents of the effectiveness of these laws cautions that "systematic studies of the conduct or attitudes within different groups of motorists are not available" (1978, p. 38-39).

A second argument offered for the deterrent effectiveness of the Scandinavian laws cites the relative stability of the rate of recorded violations over time in the face of increasing traffic, occasional modifications of the laws, and greater alcohol consumption. This relative stability is held to be evidence of deterrence (Ross 1975, p. 294). However, the argument is not satisfactory, for any number of factors could explain a constant official violation rate, for instance, an unchanging amount of resources being devoted to the control system of police and courts.

More impressive evidence is raised by Andenaes, who found that violation rates per 100,000 registered vehicles in Norway actually declined following the legislation of 1936. However, further examination suggests that the decline was part of a larger overall fall in the violation rate during the 1930s, and that the change is not significant. Then, too, one could make the case that violation rates are a product of official activity and have no necessary relationship to the amount of actual drinking and driving on the highways.

A third argument is based on the impression that alcohol is less often found in the blood of fatally injured drivers in the Scandinavian countries than elsewhere. A principal problem with this argument is that it is not supported by the facts. Studies of injured drivers in both Sweden and Norway show proportions of drivers with elevated blood alcohol that are well within international norms (OECD 1978, p. 25).

While roadside surveys of non-crash-involved Scandinavian drivers find very low blood alcohol levels, this may suggest the presence of factors other than deterrence. Examples of such factors might be different patterns of liquor use, including abstention at most times, legal controls over the availability of alcoholic beverages, or different patterns of vehicle ownership and use. Indeed, the conjunction of low levels of alcohol in the blood of drivers in general with high levels among crash-involved drivers presents an enigma that is not easily explained under any simple model of legal effectiveness, but that suggests that "the law's motivating effect is strongest among those who would have represented only a moderate traffic accident risk even if they had consumed alcohol in excess of the legal limit" (Andenaes 1978, p. 46).

The frequency of personal and social pathology among those convicted of drinking and driving is sometimes cited as an argument in itself for the deterrent value of the Scandinavian laws, the inference being that the people without such problems have been deterred. However, the conclusion does not follow. Mentally healthy white-collar Scandinavians may refrain from drinking and driving for a variety of reasons, of which law furnishes only one. Furthermore, the same finding concerning problem conditions among drinking drivers occurs in jurisdictions that find it impossible to state any claims for the deterrent values of their law (Ross 1975, p. 298).

A fifth argument concerns the level of public knowledge and support for these laws found in survey data. Hauge recently has demonstrated that the Norwegian law is known in detail, and that the 50 mg level "has become part of the moral climate." (1978, p. 68). Knowledge of a law is a prerequisite to its deterrent effectiveness, and we may concede that this prerequisite has been fulfilled. However, it is a necessary and not a sufficient condition for deterrence, and the argument goes no further.

In sum, there is no adequate proof for the proposition that the Scandinavian per se laws deter people from drinking and driving. There are two important additional points to make. On the one hand, there is no adequate evidence for the operation of the simple deterrence mechanism associated

with the Norwegian or Swedish law. On the other hand, a variety of facts are consistent with the possibility that the Scandinavian countries have achieved some marginal deterrence over the long run. However, some caution is indicated concerning even the latter possibility because of the still disturbing proportions of killed and injured drivers in Norway and Sweden who have high blood alcohol concentrations. Moreover, the actual risk of apprehension for drinking and driving seems to be low in Scandinavia (Persson 1978) and the public appears to perceive this fact (SOU 1970). One Scandinavian study (Norstrom 1978) has further found that the perceived risk of detection is not related to the incidence of drinking and driving. In short, the legal threat posed by the laws of Norway and Sweden may not be reaching those who most need to be deterred, possibly the "problem drinkers" of the American literature who are involved in a large share of serious crashes and may be particularly resistant to deterrence through law.

Great Britain

In 1967, the British Parliament adopted the Scandinavian model in legislation affecting drinking drivers. The Road Safety Act of 1967 represented one of the first important adoptions of the model outside the Northern countries, and it furnished the first large-scale example of demonstrated effectiveness of legislation in deterring drinking and driving. Its success stimulated the subsequent adoption of similar laws in nations all over the world.

The British legislation had its inception at a fortunate time for analysis. The drinking-and-driving problem was at a chronic rather than an acute level, eliminating return to normalcy as a plausible explanation for any decline in subsequent crashes. The British statistical series concerning crashes, fatalities, and related matters were of good quality and were available in considerable detail for several years before and after the inception of the legislation. No other important laws promising reduction in crashes were adopted at or near the same time. Particularly important is the fact that the legislation preceded by several years the strong disruption in world traffic patterns occasioned by the 1973 fuel crisis, which has interfered with evaluations of many subsequent traffic safety innovations.

Prior to 1967, British law concerning drinking and driving took the form of modified classical legislation. The Road Safety Act of 1967 brought two major changes to existing British legislation on drinking and driving. First, it created the offenses of driving, attempting to drive, or being in charge of a motor vehicle on a road or other public place with a BAC in excess of 80 mg/100 ml. Second, it permitted the police to demand a screening test of breath under certain conditions. Failure of the breath test or unreasonable refusal would subject the accused to the requirement of a second breath test at a police station and eventually the withdrawal of blood for the evidentiary test. Refusal to take part in the tests was punishable as though the tests had been failed. It is worthwhile to note that the Road Safety Act of 1967 did not increase the severity of the penalty for drinking and driving. The most feared punishment was the year's license suspension, enacted in 1962, and in practice the courts added little in the way of additional punishment, other than nominal fines, for violation of the 1967 act.

The Road Safety Act of 1967 was controversial both before and after its adoption, a fact crucial to its effectiveness. While widespread initial hostility helped eliminate a random breath test provision, the law's remaining provisions were the object of public opposition for months and years. Antipathy to the legislation was common even among police and judges. The former applied the law in a sparing and restrained way that surprised the Government, which had to throw out hundreds of thousands of screening breath test devices that had passed their expiration dates without use. The latter produced a wealth of decisions favoring defendants on the basis of technicalities.

From the viewpoint of the Government these difficulties were sad testimonials to the intransigence and stubbornness of officialdom, sabotaging virtuous legislation aimed at saving lives. But perhaps from the viewpoint of the deterrent mechanism these difficulties were an unforeseen and essential boon. The Road Safety Act was news! At the inception of the act, the Government had spent £350,000 on a publicity campaign, including preparing and circulating a leaflet on the law and publicizing its provisions with television and other media. However, this campaign was limited in duration, and although surveys at the time showed that people were made aware of the law it is not clear that official publicity alone could have created and maintained the impression of a certain and severe threat. It is very likely that continued attention to the law, in large part because of the difficulties in enforcement, helped achieve and maintain a perception of increased threat.

Road casualties declined impressively in the months subsequent to the inception of the British legislation. Unlike the case in Scandinavia, application of adequate methodology to a longer series of data from Great Britain does strongly support the idea that the Road Safety Act of 1967 had a deterrent effect on drinking and driving.

The data show that the reduction in casualties generally is explained largely by a reduction in alcohol-related casualties. Additional data are available to support the deterrence interpretation of these findings. A comparison of results from surveys of drivers in September 1967, before the act took effect, and in January 1968, after the act had been in force for 3 months, reveals that there was a decline from 60 to 48 percent in the number of drivers admitting to combining drinking and driving. There was also an increase in the number of people reporting walking to their drinking places. The change was largest for drinkers in pubs. Prior to the act, 49 percent reported returning from the pub by car, whereas after the act the percentage was 37 (Ross 1973, p. 65). In addition, blood alcohol statistics from samples of all drivers killed in crashes in England and Wales reveal that from December 1966 to September 1967, prior to the inception of the legislation, 25 percent of the victims had illegal blood alcohol concentrations. This declined to 15 percent in the corresponding period of 1967-68. These independent data lend support to the interpretation that the Road Safety Act of 1967, through its effect on perceived threat of punishment, caused people to separate drinking from driving, resulting in the saving of

many lives (Ross 1973, p. 66).

Although the evidence is strong that the Road Safety Act was initially effective, it is also now clear that this initial effect dissipated within a few years. The curve of total casualties fell less steeply after 1967, and the curve of fatalities actually changed direction from decline to an increase. By projection, it appears that without further change, the initial casualty savings would disappear over time. On the basis of similar data, British officialdom came to the flat conclusion that "the effect of the act is wearing off" (Saunders 1975, p. 845).

What caused this decrease in effectiveness? Saunders looked at larger social trends such as increasing alcohol consumption and changes in the size and distribution of national income; however, inspection of data from the early years of the act indicate that deterrence was being accomplished without a decline in alcohol consumption, apparently because drinking was being separated from driving. There is no reason why the same phenomenon could not take place even with an increase in alcohol consumption.

Why the change, then? The deterrence model suggests that British drivers separated their drinking and driving following passage of the legislation because they feared that there was now a realistic likelihood of being punished. However, the real chances that a drinking driver would be caught, charged, and convicted in Britain—though much increased—never reached a very high absolute level. The gap was not in the matter of conviction—the vast majority of those charged were convicted (Saunders 1975, p. 851)—but rather in the probability of being charged.

The initial publicity campaigns and newsworthiness surrounding the Road Safety Act made the legislation very well known. They also very likely gave a grossly exaggerated picture of the certainty of apprehension and the severity of punishment that might be expected by a drinking driver in Britain, thus leading to the act's initial deterrent effectiveness. It seems reasonable to ascribe the subsequently rising curves of casualties and of alcohol-related deaths to the gradual learning by the British driving population that they had overestimated the certainty of punishment under the new law.

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NIAAA Prevention Campaign Targets Drinking and Driving Among Youth

Billboards reading "It's Okay Not To Drink" in Rhode Island are just one example of the innovative ideas generated by local groups as part of the 1982 Alcohol Abuse Prevention Campaign sponsored by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). The campaign is a cooperative effort involving the Federal Government, national voluntary organizations, State governments, and local groups.

Teenagers who drink and drive are one of the audiences the campaign addresses. According to statistics, alcohol-related accidents account for between 40 and 60 percent of the highway fatalities among 15- to 24-year-olds, and the group at greatest risk is teenage boys.

The campaign portrays positive role models, helping youth to develop alcohol refusal skills. "It is socially acceptable to refuse alcoholic drinks," says Judi Funkhauser, campaign project officer, "but it's difficult to get that concept across to teenagers who often let their peers make drinking decisions for them." The campaign includes TV and radio spots directed at youth, with such titles as "Test Track," "Sports Story," and "Saturday Night." There are also print materials including ads, posters, and brochures.

The youth-oriented materials were pretested with groups of young people, and all of the materials were "showcased" in five regions throughout the country, as well as in many of the States in cooperation with local chapters of Parent Teacher Associations, superintendents of schools, governors, mayors, city councils, State automobile associations, chiefs of police, parent organizations, and local media representatives.

The campaign combines a mass media strategy with a local prevention strategy. Public service announcements have been distributed to national television networks and to local TV and radio stations, with support from State and local organizations. Posters, ads, and brochures are being distributed to newspapers and to a wide range of organizations serving women and youth.

The materials are being distributed by the State Alcoholism Authorities (SAAs) and local organizations concerned about preventing alcohol problems. Organizers spread information about the campaign, urge broadcasters and other media outlets to use campaign materials, and sponsor prevention activities in local communities.

For further information, contact the campaign coordinator at your State Alcoholism Authority. The number usually is listed in the telephone directory under State government offices.

—John Small
Staff Writer

Resource List

The following is a partial listing of resources useful to those seeking to increase their knowledge or to educate others on alcohol and traffic safety. The groups and organizations listed provide information, special materials and publications, and technical information.

General Information Resources

AAA Foundation for Traffic Safety
8111 Gatehouse Road
Room 328
Falls Church, VA 22047
(703) 222-6891

U.S. Department of Transportation
National Highway Traffic Safety Administration
Office of Traffic Safety Programs, NTS-19
400 Seventh Street, SW, Room 5130
Washington, DC 20590
(202) 426-0874

National Safety Council
444 North Michigan Avenue
Chicago, IL 60601
(312) 527-4800

American Association of Motor Vehicle Administrators
1201 Connecticut Avenue, NW, Suite 910
Washington, DC 20036
(202) 296-1955

NIAAA Clearinghouse for Alcohol Information
P.O. Box 2345
Rockville, MD 20852
(301) 468-2600

National Institute on Drug Abuse
5600 Fishers Lane
Room 10A56
Rockville, MD 20857
(301) 443-6500

Other Sources of General Information

Highway Users Federation for Safety & Mobility
1776 Massachusetts Avenue, NW
Washington, DC 20036

Kemper Insurance Group
Public Requests Department
Corporate Relations, Department D-5
Long Grove, IL 60049

Allstate Insurance Company
Safety Director
Allstate Plaza
Northbrook, IL 60062

Aetna Life & Casualty Company
Public Relations Department
Hartford, CT 06115

Highway Safety Research Institute
Public Information Materials Center
University of Michigan
Huron Parkway & Baxter Road
Ann Arbor, MI 48109
(313) 764-2171

Southern Illinois University
Safety Center
Carbondale, IL 62901
Attn: Dr. James E. Aaron

American Medical Association
Safety Education Department
535 North Dearborn Street
Chicago, IL 60610

Distilled Spirits Council of the U.S., Inc.
Suite 1300, 425 13th Street, NW
Washington, DC 20004
Attn: Duncan Cameron
(202) 628-3544

General Motors Corporation
Public Relations Department, 11th Floor
3044 W. Grand Blvd.
Detroit, MI 48202
(313) 556-2030

United States Brewers Association
1750 K Street, NW
Washington, DC 20006
Attn: Chris Valauri
(202) 466-2400

Citizens for Safe Drivers Against Drunk Drivers and Other Chronic Offenders
5632 Connecticut Avenue, NW
P.O. Box 42018
Washington, DC 20015
Attn: Ken Nathanson
(301) 469-6588

Insurance Institute for Highway Safety
Watergate 600
Washington, DC 20037

GEICO Corporation
GEICO Plaza
Washington, DC 20076
Attn: Terry Baxter
(301) 986-2757

American Red Cross
National Headquarters
Washington, DC 20006
Attn: Norman Burnett, Health Services

National Congress of Parents and Teachers
700 North Rush Street
Chicago, IL 60611

Safety Research and Education Project
Teachers College, Box 90
Columbia University
New York, NY 10027
Attn: Dr. James Malfetti, Director

Health and Safety Education Division
Metropolitan Life Insurance Company
One Madison Avenue
New York, NY 10010

Ohio Insurance Institute
513 East Rich Street, P.O. Box 632
Columbus, OH 43216

Operation Threshold
U.S. Jaycees
Box 7
Tulsa, OK 74102
Attn: Richard Spoonster

Mothers Against Drunk Driving (MADD)
5330 Primrose
Suite 146
Fair Oaks, CA 95628

Reduce Intoxicated Driving (RID)
P.O. Box 520
Schenectady, NY 12301

Films and Audiovisuals

AAA Foundation for Traffic Safety (address above).

Senior Adults, Traffic Safety and Alcohol (Cost: $55); Alcohol Trigger Films for Junior High School—*The Party*, *The Mother*, and *The Ride* (Cost: $37 each); *AL-CO-HOL—A Mini-Course for Junior High Schools* (Cost: $90); *Teenage Drinking and Driving—A Course for Action* (Cost: $95); *Drink, Drive, Rationalize* (Cost: $85); and *DWI Phoenix* (Cost: $90).

Highway Users Federation (address above).

One Drink Too Many (Cost: Free); available also through local new car, truck, and tire dealers.

National Highway Traffic Safety Administration (address above).

National Audio Visual Center
Information Services Room
Washington, DC 20401
Jackson Jr. High series—*Route One* (Cost: $130 for 16 mm, $55 for video), audience: high school students; Dial ALCOHOL series—*Al's Garage* (Cost: $250 in 16 mm, $65 in video), audience: ages 15-18.

FLI Learning Systems Inc.
P.O. Box 2233
Princeton, NJ 08540
(609) 466-9000
Too Much of Anything Is No Good (Cost: $100), audience: elementary educators; *The Odds Are Against You*, trigger film (Cost: $98), audience: high school students; *Stop and Think* (Cost: $316), audience: grades 7-12.

Education and Training Materials

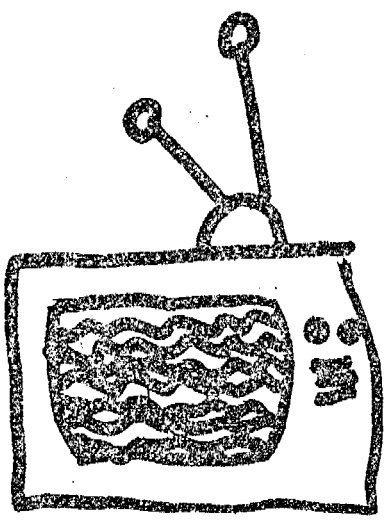
AAA Foundation for Traffic Safety (address above).
DWI Minicourse for High School Driver Education Programs; a report on the *Development of a Junior High School Module in Alcohol Education and Traffic Safety* (Cost: $3); *Development of a Traffic Safety and Alcohol Program for Senior Adults* (Cost: $2); report on *Development of an Alcohol Education and Traffic Safety Module for Elementary School (K-6)* (Cost: $5); *Counseling Manual for Educational and Rehabilitative Programs for Persons Convicted of Driving While Intoxicated* (Cost: $2).

National Highway Traffic and Safety Administration (address above)
Alcohol Resource File (Cost: Free; limited availability); *NHTSA Alcohol Curriculum Project* (Cost: Elementary level—$8.75, Junior high level—$11.75, Senior high level—$12.50; checks to U.S. Government Printing Office, Washington, DC 20402). *Alcohol and Driving—The Decision is Yours* (Cost: $10, check to GSA, National Audiovisual Center, Washington, DC 20409).

American Automobile Association
(available through local AAA office)
If You Drive, What About Drinking (Cost $16); *DWI Counseling Manual* (Cost: $2).

American Driver and Traffic Safety Education Association
123 North Pitt Street
Alexandria, VA 22314
(703) 836-4748
People Do Drink and Drive (Cost: $1.20 per copy, $15 for 25 copies).

Safety Center, Southern Illinois University (address above)
Alcohol and Highway Safety Curriculum in Driver Education Teacher Preparation (Cost: $5).



Television and Radio Spots

Highway Safety Research Institute
Public Information Materials Center
(address above)

National Highway Traffic Safety Administration
(address above)
Alcohol PSAs

AAA Foundation for Traffic Safety
(address above)

State Alcoholism Authorities □

—Compiled by Jim O'Hair

NIAAA CLEARINGHOUSE: A DECADE OF DOING

The National Institute on Alcohol Abuse and Alcoholism Clearinghouse, through its information services and publications, supports people and programs who want to do things and are getting things done in the alcohol field.

A quarterly magazine, fact sheets and "In Briefs," a periodic news service, a bimonthly annotated listing of new literature, and a wide range of other informational materials are available from the NIAAA Clearinghouse, most of them free of charge.

If you are working in the alcohol field or are involved with alcohol issues, the NIAAA Clearinghouse can help you get things done. Write for a product listing and order form. The NIAAA Clearinghouse, P.O. Box 2345, Rockville, MD 20852.

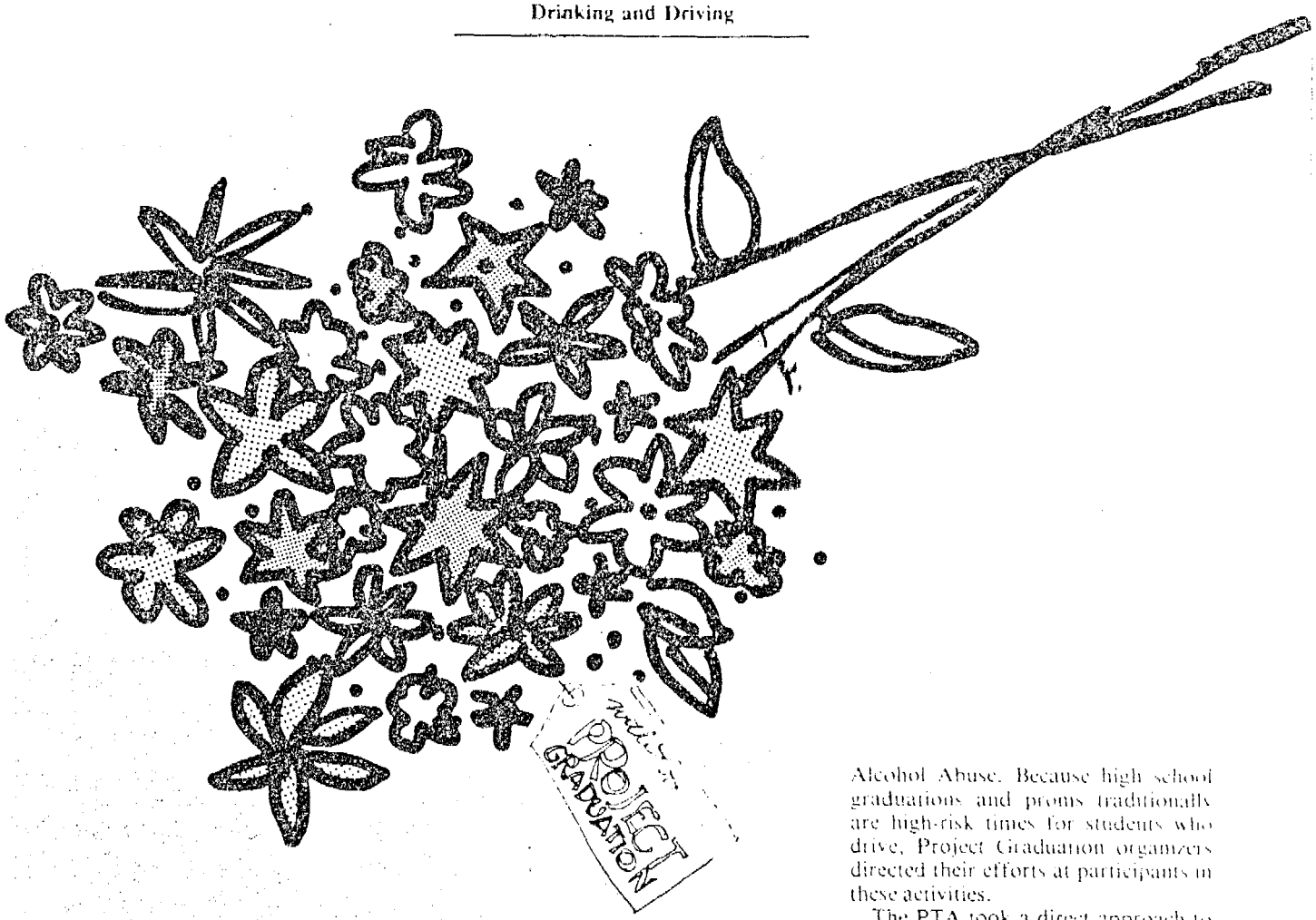
Governors Appoint Drunk Driving Task Forces

The Governors of 36 States had appointed or planned to appoint task forces or special commissions on drunk driving as of August, according to the Presidential Commission on Drunk Driving. These task forces or commissions, consisting of a broad cross section of those involved in addressing the problems related to driving and drinking, have focused attention on deficiencies in State programs and have recommended solutions. As a result, new laws have been passed, enforcement increased, and citizen awareness of the problem increased.

Task forces have been appointed or are planned in the following States: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, New Jersey, New York, Deleware, Maryland, Pennsylvania, Virginia, West Virginia, Florida, Georgia, Kentucky, North Carolina, South Carolina, Illinois, Indiana, Ohio, Arkansas, Louisiana, New Mexico, Oklahoma, Texas, Iowa, Kansas, Missouri, Colorado, North Dakota, South Dakota, Arizona, California, Hawaii, Oregon, and Washington. □

Correction

The address for the Association for Administration of Volunteer Services, listed in the Resource Listing, page 58, of the Spring 1982 issue of Alcohol Health and Research World, *was incorrect. To contact this group, please write to: The Association for Volunteer Administration (AVA), P.O. Box 4584, Boulder, CO 80306.*



Preventing Drinking While Driving Among Youth: Four Approaches

Editor's Note: Because young people are at highest risk of any age group for involvement in alcohol-related traffic accidents—and fatalities—a number of approaches have been developed to prevent or reduce such incidents. The following articles describe four differing programs designed to reduce alcohol-related traffic accidents among young people.

Project Graduation Seeks To Reduce Teen DWI Incidents

In spring, when teenagers' thoughts turn to graduation, proms, and trips to the beach, very few stop to consider the consequences of drinking and driving. Yet, traffic accidents involving alcohol are a leading cause of death for youth between the ages of 16 and 24, with the number of fatalities escalating in May and June. This year, parents, teachers, students, and members of the business community in Montgomery County, Maryland, launched a program aimed at halting this trend.

"Project Graduation" was organized by the Montgomery County Ad Hoc Task Force on Drinking and Driving, the Montgomery County Regional Student Governments, the Council of Parent-Teacher Associations (PTA), and the Business/Community Team Against Drug and Alcohol Abuse. Because high school graduations and proms traditionally are high-risk times for students who drive, Project Graduation organizers directed their efforts at participants in these activities.

The PTA took a direct approach to curbing teenage drinking while driving, providing a hotline number teens could call for free rides on prom night and recruiting parents to act as drivers. Members of the business community cooperated by printing cards with the hotline number and slipping them into corsages, boutonnieres, and rental tuxedos. In addition, similar cards were placed on tables at the proms, while posters proclaiming "Friends Don't Let Friends Drive Drunk" graced the walls.

Prevention activities, begun well in advance of the graduation season, included presentations of "Scared Stiff," a videotape account of the dangers of drinking and driving, by Montgomery County policemen at most of the area's high schools, and broadcasts of public service announcements over local radio and television stations. Students, parents, and faculty also coordinated distribution of Project Graduation materials within the schools, as well as to local newspapers, in their attempt to ensure that alcohol-related driving fatalities are no longer part of the traditions associated with graduation night.

—Jill Vejnoska
Staff Writer

Schools and Courts Join Forces To Intervene With Youth DWI Offenders

Often a judge may have only two choices in sentencing a juvenile involved in driving while intoxicated (DWI) or another alcohol-related offense—probation or referral to a detention center. Now in the west Boston suburb of Newton, Massachusetts, there's a third, thanks to an unusual partnership between the courts and the local school system.

The Newton Youth Alcohol Program requires adolescents referred by the courts for alcohol-related crimes to attend, as a condition of their probation, at least three evening meetings of the program weekly. "There are a lot of treatment programs that deal with the courts, but the involvement of the schools is unique," said Matt Green, a counselor with the program.

School program counselors take the adolescents to two Alcoholics Anonymous (AA) meetings each week and conduct a weekly group therapy/education session themselves. Youth can earn up to 5 units of academic credit for 1 year of participation in the program, the usual period of probation, he said.

The three school counselors who run the program are also responsible for the Youth Development Program of the public school system. That program provides counseling for alienated adolescents who cannot attend classes because of emotional and psychological disturbances, which often involve drugs and alcohol, Green said. Through supportive group therapy they learn to cope with the realities of everyday living and, in many cases, eventually return to school.

It was as a result of their work with the Youth Development Program that the counselors developed a close working relationship with district court judge Monte G. Basbas. Basbas observed to the counselors that 80 to 90 percent of the juvenile offenders he saw had committed alcohol-related crimes, and there was no appropriate treatment available. His comments were taken as a challenge by the counselors who designed and set up a program for juvenile offenders in coordination with district court staff.

The program has "really exploded" in the past 2 years, said Green. Eight boys were enrolled in the 1980-81 school year; the number of students has almost tripled this year, and includes 18 boys and 3 girls.

Although most program participants are court referred, a few have come of their own accord. Most of the participants are second offenders, and the majority of convictions are for driving while intoxicated. Other alcohol-related crimes include disorderly conduct, breaking and entering, stealing a car, robbery, and malicious destruction. All of the youths are Newton residents and between 14 and 22 years old, the age group legally entitled to educational services.

About half of the youths are from Newton's two high schools and a few come from area junior highs; a few are beyond school age. About one-fourth of the program participants are dropouts, one of whom has decided to return to school and complete his education, Green said.

A few of the adolescents have severe alcohol problems; the difficulty is getting them to admit it, Green said. "Some who are 19 or 20 years old have been drinking since they were 11," he said. For the others, the program is preventive, acting as a deterrent to excessive drinking and further alcohol-related criminal behavior. "If they have to stay in the program for a year, they won't be nearly as eager to do what they did again," he said.

The majority of the program participants have at least one alcoholic family member, he said. Most have had recurrent problems in school as well as out, but a few have done well in school and plan to go to college. It is their excessive drinking that has involved them with the courts, Green said.

The group therapy/education session led by two of the counselors is reality based, and the goal is to help the adolescents become more aware of how alcohol has contributed to their problems. They are encouraged to talk about themselves and their friends. Part of the sessions focus on alcohol education. Individual counseling and treatment at an outside agency occasionally also may be recommended.

Parents are encouraged to attend the meetings, but only a few do so. "Most don't care; that's where part of the problem is," Green said. A few are truly interested, although like the students, they initially tend to deny that any alcohol-related problem exists, he said.

In addition to denial, most of the adolescents show initial bitterness toward the counselors, police, and teachers—anyone in authority. Attitudes change, however, as they progress through the program. "They are more willing to accept that they may be learning something. They may not acknowledge that they have problems with alcohol, but they are willing to listen," Green said.

Every 3 months, program participants are evaluated for attitude, participation, and attendance, and a decision is made on whether the program should be continued. Those who miss meetings are remanded to the court. Depending on how they present their case at a hearing, they are returned to the program or, in a few cases, sent to a detention center. Most attend for about a year, although a few use the group for support and continue on a voluntary basis after probation.

Four participants committed repeat offenses during the probation period. Testimony to the program's apparent success, however, is the lack of repeat offenses among the 15 participants who have successfully completed the program in the past 2 years.

The staff, who must divide their time between the alcohol program and the Youth Development Program, spend about 90 percent of it on alcohol-related problems, Green estimated. They meet weekly with the assistant chief probation officer who is liaison to the alcohol program. Monthly meetings with the probation department and court psychiatric staff and social workers were initially held to develop program policies and procedures. Now they are used to present educational information to court personnel—some of the same information the adolescents receive. They also discuss specific cases. A staff member is also usually present in court 3 days a week in the event that a referral is made or if they must participate in a trial or hearing.

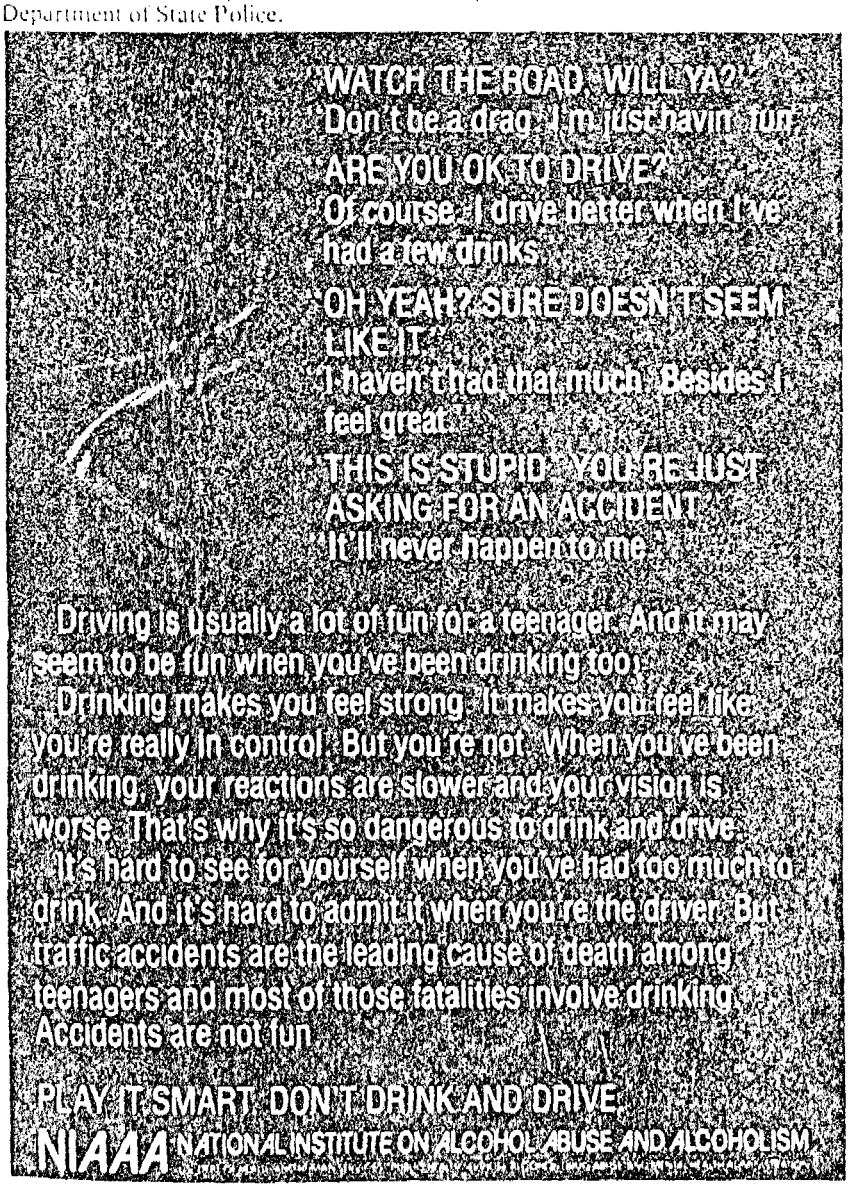
Green hopes that other cities will want to set up similar programs. Both the judge and Green have begun to spread the word in nearby areas about how effective the schools can be in the treatment of alcohol-related offenses. For further information, contact Matt Green, Newton Youth Alcohol Program, Pupil Personnel Services, Newton Public Schools, 100 Walnut Street, Newtonville, MA 02160.

—Nancy Johnson
Staff Writer

Michigan Develops Curriculum To Reduce DWI Among Youth

Three years ago, when the State of Michigan decided there was an urgent need to reduce drinking and driving among youth, State officials found there were few prevention or educational materials on youthful drinking and driving that had been shown effective in changing behavior. According to Mark Steinberg, chief of prevention services in Michigan's Office of Substance Abuse Services, Lansing, the State decided to develop its own materials as part of a comprehensive prevention education product funded by the National Highway Traffic Safety Administration through the Michigan Department of State Police.

The motivation to develop an educational program was reinforced by the Michigan legislature's passage 2 years ago of a law requiring persons less than 20 years old who had committed an alcohol-related offense to participate in an educational program or pay a fine, Steinberg said. A major outcome of the prevention education program is a curriculum package and related curriculum materials to be used by teachers, community substance abuse professionals, and others involved with youth, aged 16 to 24 years. The materials were tested in various formats and settings over a period of 15 months; youth who took the course were evaluated for changes in knowledge, attitude, and behavior.


"WATCH THE ROAD, WILL YA?"
"Don't be a drag. I'm just havin' fun."
"ARE YOU OK TO DRIVE?"
"Of course. I drive better when I've had a few drinks."
"OH YEAH? SURE DOESN'T SEEM LIKE IT."
"I haven't had that much. Besides, I feel great."
"THIS IS STUPID. YOU'RE JUST ASKING FOR AN ACCIDENT."
"It'll never happen to me."
Driving is usually a lot of fun for a teenager. And it may seem to be fun when you've been drinking too.
Drinking makes you feel strong. It makes you feel like you're really in control. But you're not. When you've been drinking, your reactions are slower and your vision is worse. That's why it's so dangerous to drink and drive.
It's hard to see for yourself when you've had too much to drink. And it's hard to admit it when you're the driver. But traffic accidents are the leading cause of death among teenagers and most of those fatalities involve drinking.
Accidents are not fun.
PLAY IT SMART. DON'T DRINK AND DRIVE.
NIAAA NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM

Adolescents generally were uninformed about alcohol's effects on driving and the risks involved, Steinberg said. Motivating youth to change their attitudes—particularly younger adolescents who perceived their risks of becoming involved in a dangerous accident as low—was difficult, he said. Even those who agreed that drinking and driving don't mix were unwilling or unprepared to take action to protect themselves or others in a potentially dangerous situation, he said.

Four curriculum models were developed and tested among 16- to 24-year-olds with different drinking levels. Model A was designed for high school freshmen and sophomores who had not taken drivers education and for their parents, who also attended some meetings. The 12-hour curriculum provided information on driving and drinking as well as exercises that emphasized the risks associated with drinking and driving. Parents and students established family contracts (written agreements) governing the use of automobiles and alcohol and spelling out the consequences of misuse. Communication was emphasized in the sessions "to create empathy for each other's position," Steinberg said. Exercises also taught students how to avoid and to intervene in drinking and driving situations.

Model B was a 3-hour program, taught in drivers education classes, that emphasized objective knowledge and attitude change.

Model C was a 12-hour program directed at college age persons. It also contained knowledge and attitude components, but the major emphasis was on avoidance and intervention skills.

Model D was a 12-hour program presented in the classroom to high school juniors and seniors. In addition to stressing knowledge gain and attitude change, students were trained in strategies to influence their peers in school and in drinking situations. Participating classrooms designed and carried out a schoolwide project aimed at educating other students.

The acquisition of basic facts about alcohol's effects on drinking and driving was stressed in all four models because motivation to act is notably increased once such information is learned, Steinberg said. Teaching techniques included lectures, discussions, and use of audiovisual materials. Students were also involved in the

practical application of their new knowledge. For example, students in Model A collected local newspaper clippings on drunk driving arrests and crashes; they were surprised at how many occurred in their towns. In Model B, students interviewed local insurance agents and police officers about drunk driving.

Motivating the students to believe that personal involvement in drinking and driving is risky and unacceptable was one of the most difficult tasks of the program. Yet, it was essential to effect behavior change, Steinberg said. For most students, particularly the young predrivers or inexperienced drivers who couldn't relate to the issie except in an abstract way, there was little or no value in stressing the risk of death or serious injury, he said. "We're trying to argue with success. 'My friends do it all the time and never have a problem,' they say."

Motivation was best achieved, he said, by presenting information on "the more frequent but less drastic" consequences of drinking and driving such as increases in auto insurance, the frequency and expense of car repairs, lawyers' fees, and the embarrassment of getting grounded. "These are more real to most younger teenagers," he said. "We hoped that these kinds of appeals could make a difference in motivating kids to pay attention to drinking and driving." Most of the youth were unfamiliar with and amazed by the range of legal and financial consequences that follow an alcohol-related crash or arrest, Steinberg reported.

Usually older youth who had personal experiences with drinking and driving were most receptive to acquiring information. According to Steinberg, many young drinkers said they'd never been caught and never expected to be caught.

Even the most motivated students, however, were unprepared to respond to real life situations, Steinberg said. "The passenger riding with the drunk driver may be terrified, but he or she often doesn't exercise the other options available." Classes focused on helping students examine alternatives by preplanning for situations or intervening in an existing situation in a nonviolent and successful way. A preplanned alternative to drinking and driving might involve, for example, making arrangements with parents ahead of time for a ride home. Assertiveness skills also were stressed in the classes.

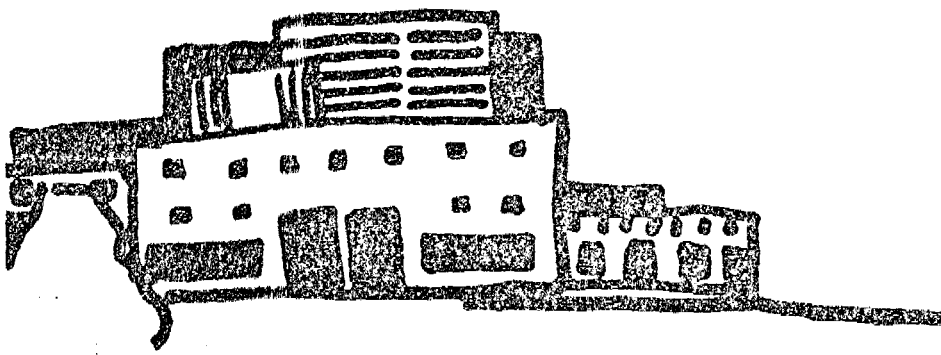
Even with rehearsal of intervention techniques, many youth were not confident that they would work. Some were unwilling to interfere, feeling that they would ruin a friendship or that it was "none of their business" if a friend chose to drink. Females, in particular, preferred health risks to the risks of losing a relationship, he noted.

Testing of the models indicated that older youth were more receptive than were younger teens to information and motivational appeals, and they had more confidence that intervention skills would prove reasonably effective. At the community colleges where some workshops were held, persons aged 25 to 35 who were not included in the project often seemed more interested in enrolling than did younger drivers, it was noted.

Following evaluation, the materials were eventually refined to develop a 3-hour core curriculum. Supplemental curriculum pieces on parent-student interaction, development of community- or school-wide projects, and the training of peer leaders were also developed.

The major problem encountered in development of the curriculum materials, Steinberg said, was the time available in schools for teaching and testing. The models tested were usually 12 hours in length, and even that amount of time was hard to squeeze into the school schedule, Steinberg said. The 3-hour length of the final product reflects the reality that time for such programs is limited.

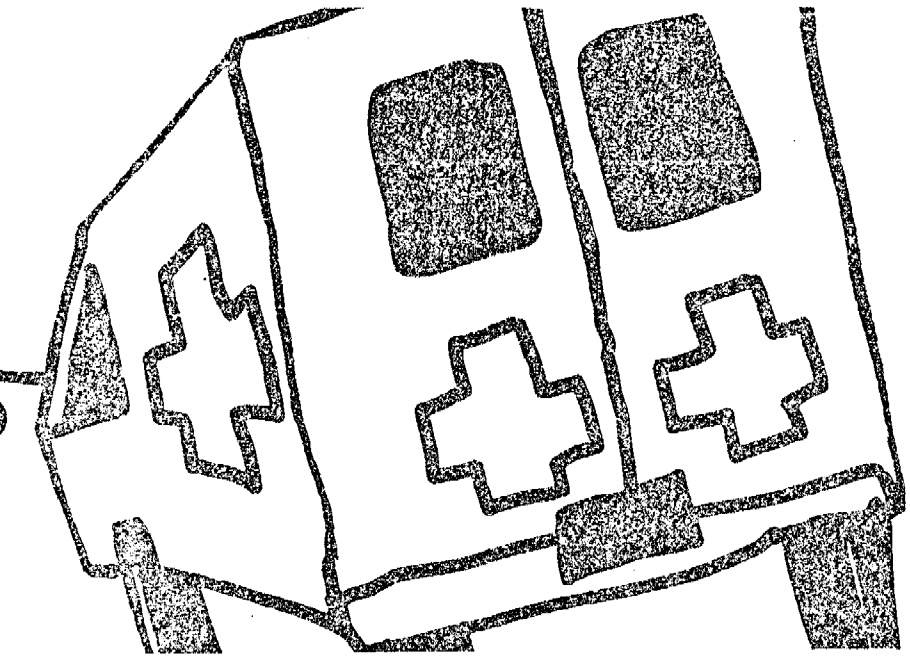
The final 3-hour package has three objectives, Steinberg said: to increase knowledge of pertinent facts; to teach adolescents about the variety of risks associated with drinking and driving, hoping they will see these risks as applying to themselves and see their own involvement in drinking and driving as risky and unacceptable; and to teach the youth ways by which they can avoid drinking and driving situations, either as drivers or as passengers.



Steinberg feels it unlikely that, given the short length of the program in most schools, change will occur in all three areas—knowledge, motivation, and behavior skills—especially among younger drivers and predrivers. Teaching style also varies widely, another variable influencing success. Very often expectations for educational programs are too high, given students' exposure to years of misinformation and peer pressure to engage in irresponsible drinking, Steinberg said. Success of any short-term educational program will also probably depend on change in

public policy concerning drunk driving and in the general social climate concerning alcohol.

Not all of the test results have been analyzed yet, only those pertaining to changes in acquisition of information, he said. They are encouraging, however, in that they show the program has been successful in teaching key facts that are retained for at least several months.



The final report and evaluation of the project were to be completed in September 1982. For further information or a copy, write to Mark Steinberg, Chief of Prevention Services, Office of Substance Abuse Services, Department of Public Health, 3500 North Logan, P.O. Box 30035, Lansing, MI 48909.

—Nancy Johnson
Staff Writer

Trauma Prevention Program Targets Teenagers

It used to be rare that the Shock Trauma Center at the Maryland Institute for Emergency Medical Services Systems (MIEMSS) in Baltimore was visited by conscious, walking teenagers. Some 30 percent of MIEMSS patients are youth in the 11- to 20-year-old range, and the majority (20 percent) are brought to this multiple trauma unit with life-threatening injuries incurred in traffic accidents. More sobering still is this statistic: 67 percent of all young people treated at MIEMSS have been involved in alcohol- or drug-related traffic accidents.

In an effort to prevent at-risk teenagers from becoming part of these statistics, the MIEMSS nursing staff developed the Adolescent Trauma Prevention Program. Identified substance-abusing youth are introduced to the Shock Trauma Center in general, and in particular, to young patients who have suffered multiple trauma as a result of alcohol- or drug-related traffic accidents.

Nurse coordinator Beverly Dearing, R.N., M.S., said that the program evolved "after a group of nurses at MIEMSS discussed their concerns that an increasing number of young people, aged 15 to 25, were being admitted to the Shock Trauma Center with multiple injuries due to highway accidents and that over 90 percent of these accidents were associated with alcohol (the patient either had a high blood alcohol level or was the innocent victim of an intoxicated driver)." The nurses recognized the significant costs of these accidents both to victims and to their families. "In many cases, injuries were extensive and resulted in permanent disability or loss of the patient's most productive years," Dearing explained. "In addition, severe trauma usually altered the family structure, creating severe emotional stress, and in many cases, created a huge economic burden for the family and also for society."

The MIEMSS nursing staff, in cooperation with the Juvenile Services Division of nearby Anne Arundel County's Department of Social Services, developed an educational program for adolescents that focused on the relationship between alcohol and drug use and traffic accidents. A large percentage of MIEMSS' youthful patients came from Anne Arundel County, where juvenile officials were concerned about the number of adolescents being referred to their agency for using alcohol or drugs while driving. According to Dearing, the MIEMSS nurses and the juvenile services administrators established the following goals for the 1-day program: to communicate the purpose of MIEMSS and the Shock Trauma Center to teens; to help them identify the potential consequences of drinking and driving; and to help them recognize their own potential as accident victims. "It was hoped that viewing the real consequences of what could happen if one mixed driving with alcohol or drugs would have a considerable impact on adolescents who characteristically feel that they are indestructible," she said.

Adolescents who participate in the program are Anne Arundel County residents, aged 15 to 18, who have been charged with possession of alcohol or drugs or who have committed motor vehicle offenses related to use of these substances. Often, a judge has recommended that a youngster attend the Trauma Prevention Program; however, participation is voluntary.

During the program, the MIEMSS nurses and the Juvenile Services administrators lead the teens in discussions of the social pressures to drink and drive, and the possible consequences of and alternatives to such behavior. "We knew from the outset that the *worst* thing we could do would be to lecture to these kids," Dearing said. The only thing faintly resembling a lecture is the program's alcohol education component, which Juvenile Services personnel provide on the van ride to MIEMSS and later at a followup session. Even then, Dearing emphasized, the sessions are informative rather than didactic. In addition

to education, the program includes a description of the Shock Trauma Center; presentation of a videotape on the center; a 30-minute tour of the trauma center; discussion with a former trauma unit patient of many different aspects of the drinking and driving issue; and a discussion and problem-solving session at which participants continue to examine their own drinking and driving and attempt to formulate alternative forms of behavior.

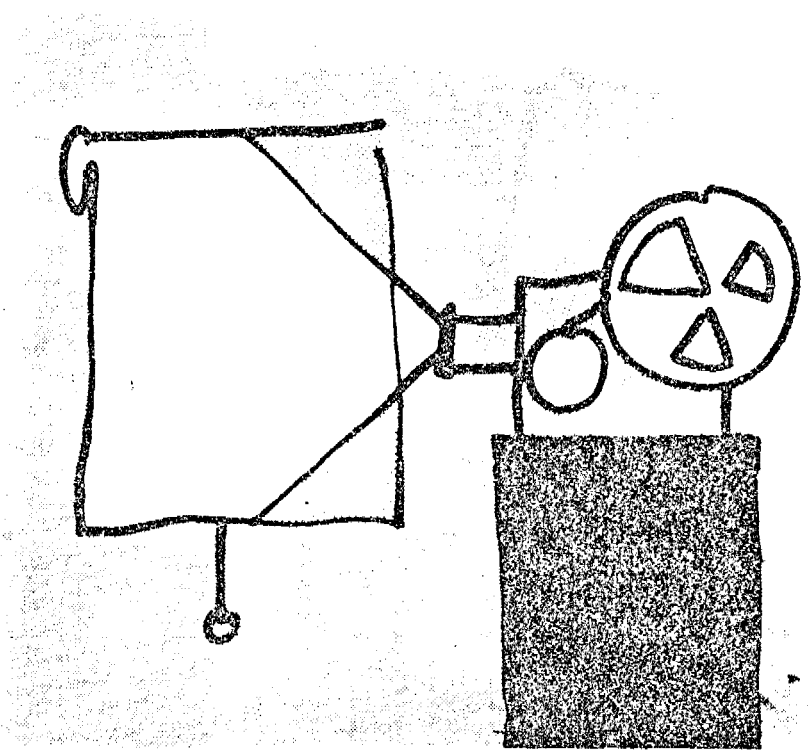
On the tour, the teenagers follow a hypothetical patient through the trauma center, beginning with the admitting room, where procedures and equipment are explained. "Sometimes a patient will be brought in by helicopter or ambulance during this part of the tour," Dearing said, "and then they'll get an opportunity to see the staff in action." They may also see severely injured individuals; efforts are made to reduce the teens' anxieties by preparing them for how patients may look. Some participants do experience discomfort during the tour, Dearing said, and the teens are encouraged to leave the tour if they are uncomfortable. A second nurse accompanies the group to monitor reactions and to assist anyone experiencing discomfort.

In the intensive care unit, the nurse conducting the tour steers them toward preselected critically injured patients. This ensures that the patients' anonymity will be protected—names, charts, and revealing features are covered up, Dearing said—and that the patients' situations will be relevant to the concerns of the adolescent trauma prevention program.

The nurses explain the patients' injuries, pointing out in particular amputations and other lasting effects of their accidents. The approach is factual, Dearing emphasized. "These are just facts of life we share with the kids." In the MIEMSS intermediate care unit, patients often talk to the teens, describing in their own words the accidents that put them there and the resultant injuries. According to Dearing, "Patients are usually willing to talk to the group; they don't want these kids to go through what they've been through."

In the final group discussion session, a former trauma patient who was injured in a substance-related traffic accident meets with the teenagers. A young man who was hit by an intoxicated driver while he was riding his motorcycle, and who subsequently had to have both his legs amputated above the knee, participates in the sessions voluntarily "because he has a lot of feelings about being hit by a drunk driver," said Dearing. "He tells the kids, 'You could hit somebody; you could have hit me' and asks them 'Did you ever think it could be you who'd end up like this or who'd be lying in one of those beds?' "

The teens question this young man.



"They tend to be most interested in how he dates and what he does for fun," Dearing said. They are usually quite eager to explore alternatives to drinking and driving, she said. "If it's a group of friends who've come into the program together, they might decide to select one person to be the driver on a particular night, and that person will agree not to drink. Or someone will say about the night he was stopped, 'Well, I guess I could have called my parents for a ride'."

Juvenile Services personnel administer a questionnaire to the teens at the end of the tour. In addition, a followup study is done 6 months later. Thus far, response to the program has been overwhelmingly favorable. Data collected on 95 of the 135 youth who participated in the program from January 1979 through May 1981 reveal that 48.5 percent rated the program "excellent," 47.5 percent, "good," and 4 percent, "fair." When asked to respond to the impact of the program on their current behavior problems involving alcohol or drugs and driving, 79 percent responded that the program would probably have a positive effect; 2 percent thought it would have no effect; and 19 percent felt it might have an effect. Data on recidivism, though incomplete, seems to support these figures. In one followup study, data was gathered on the program's first 54 participants. Of these 54, only 3 were rearrested (6.4 percent), and only 1 was for a specific alcohol-related charge (driving while impaired). Another followup study, a survey of 41 participants, found that only 1 had been rearrested for a motor vehicle violation, and there was no indication that it was alcohol or drug related.

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New Zealand

New Zealand legislation in the matter of drinking and driving closely followed the model of the British Road Safety Act of 1967. The Transport Amendment Act of 1966 had established a procedure for taking blood samples of accused drivers, and in 1969 the status of a blood alcohol concentration of 100 mg/100 ml was changed from a rebuttable presumption of alcohol influence to an absolute limit and cooperation in furnishing blood samples was made compulsory. Although other modifications of the law took place subsequently, the 1969 change is considered the most substantial, and it furnished the basis of the principal published evaluation (Hurst 1978).

The 1969 legislation provided that a police officer could demand a screening breath test of a driver if the officer had "good cause to suspect an alcohol offense" (Hurst 1978, p. 288). In 1974, it became necessary only to suspect the driver of having consumed alcohol. Failure of the initial test led to a second test 20 minutes later, and failure of the second breath test resulted in the requirement of a blood test. Cooperation with the screening tests was not mandatory, but noncompliance rendered the blood test compulsory. Refusal of the blood test led to the same penalty as its failure. These penalties included a minimum license suspension ("disqualification") of 6 months, except in "special circumstances," in addition to fines and possible prison or "detention." Hurst reports that typical sentences since the 1969 law included fines of $50 to $400 and a license suspension averaging 12 months.

In the first full year under the new law there were nearly 5,000 drinking-and-driving prosecutions in New Zealand, a rate (based on vehicle registrations) approximately three times that in Britain under the Road Safety Act of 1967; by 1975 the rate had more than doubled, after which it stayed relatively constant. Furthermore, the proportion of prosecutions ending in convictions reached between 96 and 97 percent.

Hurst's evaluation of the New Zealand legislation uses a variety of official measures of effect. His overall conclusion is negative, stating that, while the law may have had a gradual effect, this is not certain, nor was it immediately effective, as was the case with the 1967 British law. Hurst cites "attendant circumstances and the quite different types of publicity given the alcohol campaigns in the two countries," and dismisses differences in the statute's content or in its enforcement as possible causes for the difference in impact (Hurst 1978, p. 287).

Hurst's negative conclusion seems overly pessimistic, attributable perhaps to his reliance on inappropriate data such as police estimates of alcohol involvement and to anticipation of larger and more permanent results than the law would permit. While the data do not sufficiently estimate the effect, I interpret the small changes in the data series as supporting the conclusion that the law did have an immediate effect, though not a lasting one.

A more optimistic view of the effectiveness of the New Zealand drinking-and-driving law, modified by further amendments in 1971 and 1974, is contained in a second, evaluative study (Hurst and Wright 1980) of two intensified enforcement campaigns conducted in 1978. The first campaign, a 2-week nationwide blitz, featured a week's advance publicity and paid advertisements in radio, television, and newspapers that continued until 5 days after the end of the enforcement campaign. According to Hurst and Wright, "the motorist, who had been told when the campaign would begin, also knew what tactics *might* be employed. . . . He had reason to believe that, if he were stopped by an enforcement officer, there was an increased chance of being breath tested (on suspicion of having recently been drinking). He also knew that there was an increased chance that he would be stopped by an enforcement officer, especially during the popular drinking hours."

The second campaign featured advertisements in newspapers and on radio—again presenting a rather threatening message and image—aimed at the late teen-early twenties age group. Hurst and Wright say that the specific blitz publicity was reinforced by the New Zealand legislature's passage, 3 days before the second campaign began, of new legal provisions raising the monetary maximum for conviction from $400 to $1,500, lowering the blood alcohol limit to 80 milligrams/100 milliliters, and introducing an absolute breath alcohol limit of 500 micrograms per liter. Evidential breath testing was also introduced, although the availability of testing devices was limited.

The evaluation of the New Zealand "blitzes" seems to have been more effectively guided by methodological principles than was the evaluation of the 1969 law, and there was greater success in obtaining appropriate data series. The evaluators did not utilize official reports of alcohol in accidents, relying instead on observations of liquor consumption in rental ballrooms; data on road injuries furnished by cooperating hospitals; analysis of claims filed with the Accident Compensation Commission to determine whether they occurred during "main drinking hours" or at other times of the week; and various analyses of total serious crashes, one of which, the ratio of nighttime to daytime crashes, seems particularly convincing. The only indicator studied that failed to reflect an appropriate change for either blitz was the ratio of single-vehicle to multiple-vehicle crashes.

Hurst and Wright's conclusion was that "each of the two enforcement blitzes reduced the road losses that normally accrue from alcohol impaired driving." However, because no analyses were performed to identify decreased driving, alcohol consumption, or the separation of drinking and driving, and all of the indices show that either immediately or after a short time things looked very much as before, no permanent change seems to have been demonstrated.

Australia

Australia is a federation, and the law of the different federated States concerning drinking and driving is variable. Most international attention has been focused on the State of Victoria, designated as having the earliest and "best" legislation from the viewpoint of deterrence (Jamieson 1968). Victoria was unusual among world jurisdictions outside of Scandinavia in its early passage of blood alcohol testing and its adoption of a law substantially following the Scandinavian model even before the British Road Safety Act was enacted.

The Victoria law on drinking and driving began to evolve from the classical model in 1958, when blood samples given voluntarily by the accused

and taken with the aid of a private physician were ruled usable as evidence. In 1961 an evidentiary breath test was substituted for the blood test, and in the following year it was made compulsory, though originally there was only a small fine for refusers. The penalties for refusal to furnish a breath sample are currently more severe—license withdrawal for 12 months—and the refusal rate is a negligible 2 percent.

The Scandinavian model was more fully adopted in Victoria in 1966, when a per se rule was enacted, proscribing driving with a blood alcohol concentration of more than .05 percent. The limit is a relatively low one by international standards, and the legislation was adopted the year before the comparable move in Great Britain.

The introduction of the Victoria law seems to have been affected by low severity of penalties and low visibility. However, apprehensions and breath tests did increase: from 1,218 in 1961, to 4,178 in 1967, and to 10,793 in 1972.

It is difficult to evaluate the Victoria per se law because the enacting legislation also changed the closing hours of pubs from 6 p.m. to 10 p.m. Given the gradualness of the development of the Victoria law, the modesty of its penalties, and the apparent lack of media attention at its introduction, it would seem unreasonable to expect marked changes in subsequent crashes even in the absence of the complicating simultaneous changes in hours.

The State of Victoria maintained its early-bird status on the world scene by adopting provisions for "random" testing of drivers for blood alcohol in 1976, the year that Sweden enacted a permanent provision of the same type and 2 years prior to the French law reform. Testing of drivers without the need to suspect alcoholic influence was permitted in predetermined roadblocks.

An evaluation of the breath testing campaigns (Cameron et al. 1980) found significant decreases in nighttime fatal crashes and serious casualty crashes and in driver casualties with blood alcohol concentrations found to be in excess of the legal criterion (the latter in single-vehicle crashes only). Compared with the period prior to the random testing law, there was an increase in the perception of probable apprehension for driving while drinking during the 1977 campaigns. This increase developed further during the 1978 campaign (only where the drinking was specified as "not obvious") and the increase was significantly greater than that occurring for the perception of apprehension for speeding.

Finally, the literature on Australia offers a glimpse of the effects of localized action to increase the severity of penalties associated with drinking and driving (Misner and Ward 1975). In "Traffictown," a city of 30,000 in the State of New South Wales, the effect of a local magistrate's "tough" penalties for drinking and driving—more formal convictions and higher fines—was that serious crashes did not appear to drop discernibly; but reported crashes decreased, the average value of insurance claims increased (because small claims were less likely to be made), and the proportion of crash-involved drivers charged by the police dropped significantly. It appears that an important effect of the "tough" judge may have been to shield some of the offenders from experiencing any sanctions at all. These findings are in accord with the literature on severe penalties more generally (Ross 1976) and suggest caution in the selection of criteria for studying the effects of severity when it is increased to unusual levels.

Canada

The Canadian breathalyzer legislation followed closely, in timing and in form, the British Road Safety Act of 1967. It has been evaluated independently by two different teams, both of which have reached the conclusion that the Canadian law had a moderate, but temporary effect upon the drinking-and-driving problem in that country (Carr et al. 1974, 1975; Chambers et al. 1976).

The heart of the Canadian legislation is the empowering of police officers to require breath tests based on having "reasonable and probable" grounds to believe that a driver is impaired by alcohol. As in Britain, the tolerated level of blood alcohol is .08 percent. The breath test is mandatory, refusal being punished by fines and imprisonment identical to the penalties for failing the test. The breath test is a quantitative and evidentiary one, not requiring a subsequent blood test, but in practice requiring the use of stationary breath testing equipment located at the police station rather than portable equipment present in the patrol vehicles like the devices used in Britain. Penalties for failing the test include fines up to $1,000, prison for up to 6 months, or both. License suspension is discretionary with the court.

Although some effect of the Canadian legislation is generally conceded, the consensus is that it was less marked and less prolonged than the effect of the British Road Safety Act of 1967. Three reasons have been suggested, with which I cannot disagree. First, the actual threat posed by the law was less in Canada than it was in Britain. Second, the threat posed by the Canadian law does not appear to have been publicized as well as that posed by the British law.

Third, it appears that the actual probability of apprehension and conviction for drinking and driving was negligible both before and after the new law.

Although there have been some attempts to increase the reality and perception of drinking-and-driving law enforcement in Canada in recent years, the reports are sketchy (Alberta's Check-Stop, cited in Ennis 1977) or ambiguous (R.I.D.E., cited in Vingilis and Salutin 1980). Farmer's report (1975) of a publicity campaign in Edmonton, Alberta, indicates a possible deterrent potential to be realized by increasing the perceived threat of the Canadian drinking and driving law, as this was one goal of the campaign.

In summary, the Criminal Law Amendment Act, though modeled on the prior British legislation, was both in fact and in perception less threatening. Its penalties were less severe and its enforcement more difficult for the police. Under these circumstances, the act would be expected to have had a smaller and less lasting effect than the British law, and this expectation is supported by evaluative studies.

The Netherlands

Recently, many countries of continental Europe have adopted the Scandinavian model. The presence of several sophisticated evaluation researchers concerned with traffic in the Netherlands has produced some interesting literature on the results of the Dutch adoption of the Scandinavian model in 1974.

The Dutch law is unique in its details. It appears to be patterned more

closely on the Norwegian law of 1936 than on the British law of 1967 in its relatively low level of tolerated blood alcohol (50 mg/100 ml) and in its apparently severe penalties, including fines of up to f.5,000 (approximately $2,500), license suspensions of up to 5 years, and prison terms of up to 3 months. Unlike their British counterparts, Dutch police always must have reason to suspect a driver of having consumed alcohol before they can administer the BAC test. Roadblocks can result in screening tests only if police smell alcohol on drivers' breath. A peculiar feature of Dutch law is that suspects failing the screening test in the field are required to take a second test at the police station, this one calibrated at 80 mg/100 ml. A driver failing the first test but passing the second is not prosecuted (though he may be violating the law); however, he is prohibited from driving until his blood alcohol concentration goes down. Only if a driver fails both screening tests is he required to give a blood sample for analysis, which, if positive, results in prosecution (Noordzij 1977; SWOV 1977).

It is reported that the law was introduced with "extensive" publicity (Noordzij 1977, p. 454), and that prosecutions for drinking and driving more than doubled (to about 20,000 per year) in the first full year following its passage. A research team from the Netherlands Institute for Road Safety Research (SWOV) used roadside surveys to gather blood alcohol concentration data on weekend nights in 1970, 1971, and 1973, and again during the weekend prior to the change and 2 and 4 weeks later. The basic results of the Netherland Institute's evaluation show that the presence and level of blood alcohol between the years differs strikingly and in the direction predicted by the deterrence model. The 1975 data seem to show some continued but weakening effect, and a small residual effect is claimed for as late as 1979 (Noordzij 1980).

Although the evidence is not uniformly favorable, Noordzij concludes that the new law was effective, reducing fatal crashes by 35 percent for the initial year and reducing total crashes by 5 percent (1977, p. 40). If these estimates are correct, the Dutch law will have been almost completely effective in eliminating the contribution of alcohol to highway crashes. Because the roadside surveys did not control for history, and the critical year of 1974 immediately followed the 1973 fuel crisis, I would prefer to be somewhat more guarded in interpreting this case. The apparent fact that the decline in blood alcohol concentrations was perceived even before the law's inception is compatible with an explanation in terms of the fuel crisis, and the greater cost and lower availability of fuel may have had some effect on reducing driving associated with drinking.

The issue of severity of sanctions in the deterrence model is serendipitously approached by a study of differences in penalties among regions of the Netherlands (Steenhuis 1977). From 1968 through 1973, unconditional imprisonment was imposed in the vast majority of drinking-and-driving cases in representative jurisdictions in the western part of the Netherlands, but only in a small minority of cases in the eastern part of the country. Roadside surveys on weekend evenings in communities in both parts found that the blood alcohol distributions were nearly identical (with about one driver in five having more than 50 mg/100 ml). Moreover, the perceived likelihood of being imprisoned upon conviction was low in both areas. The most disappointing finding from the viewpoint of deterrence expectations is that drivers who expected prison for drinking and driving did not differ significantly in blood alcohol measures from those who expected lesser penalties. These findings lead to the view that any positive accomplishments of the 1974 Dutch law were very likely more strongly related to perceptions of an increased danger of being apprehended and convicted rather than to changes in the perceived severity of the penalties.

France

Having been moving from the classical model for several years prior to 1978, France adopted a fully Scandinavian-style law on July 12 of that year. Breath testing was introduced in 1965, and a per se law was established in 1970. The new law stated that any driver could be required to submit to a screening test for blood alcohol, regardless of his driving behavior, in the context of roadblock operations ordered by the region's chief judicial official. Failure to pass the screening test could result in an order to cease driving then and there, until additional breath test results became negative, as well as to submit to existing penal sanctions. Moreover, a driver's license could be cancelled as a consequence of the driver's being found guilty of exceeding the .8 pro mille blood alcohol concentration. Revocation of the license was mandatory under two circumstances: if the blood alcohol level exceeded 1.2 pro mille and the accused had caused death or injury, or on a second or further offense in which the blood alcohol concentration exceeded 1.2 pro mille regardless of involvement in crashes. The offender would not be able to apply for a new license during a period of up to 3 years.

As had occurred in Great Britain, considerable objection to these provisions arose in France among individuals who considered the roadblocks intrusive and insulting or who thought the mandatory license revocation provision detrimental because it removed a traditional source of discretion from the judiciary.

Another basis of objection to the practice of roadblock operations was the discovery that, although the limit of tolerated blood alcohol was 0.8 pro mille, the screening devices used were calibrated at the lower level of 0.5, without notice to the ordinary police or to the public; presumably, one could fail the screening test and be required to furnish a blood sample without having violated the law.

In France as in Britain, the opposition to the legislation may have helped disseminate knowledge (and perhaps fear) of its provisions. It soon became one of the best-known French laws.

A 1978 survey showed that 53 percent of the public and 61 percent of drivers surveyed at that time thought that the roadblock operations were infrequent; indeed, the roadblocks were relatively rare, and only about half of the positive breath tests were confirmed by subsequent blood tests, leading to prosecutions. It is possible that police adopted a pro-defendant bias and that advance announcements of roadblocks (for publicity reasons) or the inappropriate times and places that were set up may have lessened their effectiveness.

herself and of course for others. It therefore seems promising to provide public transportation as an alternative to drinking and driving at times and places with a high concentration of drinking. There do not seem to be any evaluations of alternative transportation programs for drunken driving countermeasures; therefore, little can be said regarding this strategy's effectiveness and efficiency.

Reducing Risk

Reducing risk refers to lowering the expected cost, in terms of deaths, injuries, and property damage, of each unit of drunk driving. A possible objection to such a strategy is the problem of perverse incentives, that as drunk driving becomes safer, people will do more of it.

I would like to suggest that, when the adverse consequences of an act are both remote in probability and so serious that they are painful to contemplate, as is the possibility of a serious accident resulting from drunk driving, a person will tend to evaluate the risk at less than its expected cost and will be insensitive to small changes in the expected cost. If this speculation is accurate, then changes in the risk of drunk driving brought about by risk-reducing measures would not have a large impact on the amount of drunk driving and would result in a reduction of total costs resulting from drunk driving (net of the cost of bringing about the risk reduction). This speculation could be tested experimentally if the amount of drunk driving in an area was measured before and after a quick and significant reduction in risk.

Some risk reduction measures are applied to drivers in general. They may be differentially more (or less) effective in lowering the risk of drivers with elevated BAC levels, but implementing the measure does not require knowing which drivers are likely to be impaired. Passive restraint systems, for instance (such as air bags or automatic seat belts), would protect vehicle occupants regardless of alcohol involvement in a crash, but they would be differentially effective in protecting drunk drivers involved in accidents since they are less likely to use conventional seat belts than are accident-involved drivers in general (Sterling-Smith 1976, p. 160). The same is true of other attempts to make vehicles more crashworthy.

Other changes in the driving environment would reduce the probability of accident or the probable severity of accidents for all drivers while having a differentially greater effect on drinking drivers. For example, the ability to divide attention between tasks has been found to be one of the driving-related skills degraded first and most severely as BAC increases (U.S. Department of Transportation 1968, pp. 42-52). Therefore, speed governors in cars, redesigned road markings, and other changes in the driving environment that reduce the driver's need to frequently shift attention would probably result in greater risk reduction among drinking drivers than among drivers in general.

Some generally applied risk reduction measures would benefit only those persons with elevated BAC levels. For example, it has been suggested that routinely testing accident victims for alcohol in hospital emergency rooms would facilitate more effective medical care and raise survival rates (Haddon and Baker 1978). When risk reduction is applied specifically to drinking drivers, however, the problem of political acceptability may be greatest. Some countermeasures, such as modifications to improve a vehicle's crashworthiness or ease of driving, may be cost effective only when applied to the vehicles of persons with previous drunk driving arrests, persons requesting drinking-driving safety devices, or persons willing to buy such protection. Such possibly effective measures are not even considered when the problem of perverse incentives is viewed as a "moral" issue rather than as an issue of effectiveness.

Future Directions in Reducing Drinking and Driving

In spite of the large reduction in deaths, injuries, and property damage that could be achieved by effective drinking-driving countermeasures, we have not developed dependable and effective technologies to bring about these savings. In the case of risk-reducing countermeasures, there is unfortunately little experience to draw on. There have been many applications of exposure-reducing countermeasures, but they have taught us little about how to do better in the future. If our ability to prevent losses from drunk driving is ever to improve, we must begin to learn from experience.

Federally funded drinking driving programs, notably the massive Alcohol Safety Action Project (ASAP) program funded by the Department of Transportation from 1969 to 1975, have generally succumbed to political pressure to produce quick results, rather than investing in the careful planning and scientific evaluation necessary to determine which countermeasures used in the program were effective. (Notable exceptions were ASAP's Short-Term Rehabilitation Study and the Nassau County experiment.)

This is not to suggest that abstract research should replace countermeasure efforts. But until we know much more about how to control drinking driving we must consider learning from experience at least as important as immediate results in any countermeasure program. Additional expenditures seem warranted only if they promise to produce findings that will help us save more lives in the future, as well as contribute to current traffic safety.

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The National Organization for Highway Safety, a research organization independent of direct governmental control, compared the proportions of non-crash-involved drivers with illegal BACs before and after the law's enactment and found evidence of deterrence.

In sum, though results are preliminary, it would appear that the introduction of a notable and notorious change in the provisions of the French law in 1978 produced a reduction in the extent of drinking and driving as measured by crash fatalities and total crashes, especially in late-night hours. It also appears that this effect was transitory and that it disappeared after several months. In the light of the relatively modest level of enforcement, in terms of both tests and prosecutions, one may speculate that the French experience teaches again that the fear of a legal threat wanes when that threat is not carried out with any regularity.

Other European Countries

The research literature mentions attempts to adopt and evaluate drinking-and-driving laws modeled on the Scandinavian law in Austria, Czechoslovakia, and Germany. However, the reports are so sketchy that the results are only marginally enlightening.

The Finnish approach to drinking and driving has until recently been based on classical law with continuously increasing penalties. In the 1960s, Finland had probably the harshest penalties in the world: up to 4 years in prison for a simple offense and up to 8 years when the behavior resulted in a fatal accident. Most sentences were for 3 to 6 months in prison, again unusually severe. In 1977 a Swedish-style, two-tier per se law was adopted, and penalties were reduced, bringing Finland into conformity with the Scandinavian model. This reform is only sketchily described in the literature (Takala 1978), and it has not been evaluated for its effect on crashes.

Relative sensitivity to the degree of the offense remains characteristic of the Danish approach, even with the shift from judicial discretion to the Scandinavian model that occurred in 1976. At that time, a two-tier per se law was formally adopted, with limits of 80 and 120 mg (Waaben 1978). Conviction for the lesser offense is punishable by fines and possible license suspension, and prison is a possibility on a second offense. Mandatory license suspension attaches to the more serious violation, and prison is a potential punishment, though it seems not to be used routinely until blood alcohol concentrations of 150 mg and over are reached. Danish police are empowered to require breath tests arbitrarily, as in Sweden. The deterrent impact of the Danish legislation has not been evaluated.

The Australian Law Reform Commission (1976) compiled the following information. Belgium permits its police unlimited authority to test drivers for drinking, and gives them the power to prohibit driving for those found to have alcohol concentrations in excess of 80 mg/100 ml. However, drivers are charged with an offense only if they are found to have levels exceeding 150 mg. Switzerland has had a classical law, though the courts have found that blood alcohol concentrations in excess of 80 mg justify conviction of driving while under the influence of alcohol. Spain has no prescribed limit of tolerance, but breath samples are required and the results may be introduced as evidence under a classical law. Italy, which officially reports extremely low involvement of alcohol in crashes, permits the testing of drivers for alcohol only with the drivers' consent. No level of tolerance has been established by legislative or judicial authority.

Conclusion

The policy innovations described in this paper, though similar, were applied in a wide variety of settings and thus provide an accumulation of knowledge. In a sense, these policy innovations may be seen as replications of a basic legal reform that achieved its reputation in Scandinavia and a definitive demonstration of effectiveness in Britain. Although all have their methodological weaknesses, these repeated studies of administrations of similar policies lead to some conclusions.

The literature is quite unenlightening in the matter of perceived celerity of punishment. Few programs were established with much concern for celerity and none have attempted to measure changes in its perception. Moreover, "the increases experienced in celerity were invariably associated with other changes relevant to the deterrence model and would be difficult to disentangle. Although the Scandinavian model for drinking-and-driving laws embodies measures that might be expected to increase celerity, notably the administrative lifting of the driver's license before final judgment, its effect on celerity has not been assessed. There is more information on the place of perceived severity of threat in the deterrence model, little of it favorable. Perceived severity is not often directly studied, but there is some indication that changes in actual severity are only weakly reflected in perceived severity, and that little significant behavior changes results from raising either one.

Increasing the certainty of punishment for drinking and driving seems to reduce such behavior; however, in the long run, this effect wanes. Jones and Joscelyn provide a clue as to why this occurs: "Research suggests that a driver in the United States would have to commit some 200 to 2,000 DWI violations to be caught. After apprehension, he would still stand only a 50-50 chance of suffering no more than a relatively mild punishment. Such a threat is apparently acceptable even to most social drinkers, who are able to control their drinking" (1978, p. 123).

Finally, it appears that exaggerated perceptions of the probability of apprehension, by publicity and media attention, result when Scandinavian-type laws are introduced. Those laws that met the most critical resistance, as in Britain, seem to have been the most successful in their initial deterrence of drinking and driving. When certainty of punishment for drinking and driving violations is low, however, this initial deterrent effect disappears.

In sum, a reasonable interpretation of the results of this review is that Scandinavian-type laws deter when initiated because of exaggerated perceptions of the risk of apprehension and punishment. Since they appear to increase the real risks much more moderately, the deterrent accomplishment rests not on a firm foundation, but rather on a temporary scaffold that becomes undermined through experience.

Research that is needed. More needs to be known about the function of the components of legal threat in affecting the behavior of drinking and driving, particularly the relation between actual and perceived certainty, severity,

and celerity of punishment (Gibbs 1975). Periodic polls over a prolonged period of successive random samples of the driving population, possibly combined with roadside testing for blood alcohol or interviews, would illuminate the relationship between specific innovations and levels of perceived threat. More also needs to be known about the interaction between certainty and severity of punishment. It would be worthwhile dividing future implementations of increased threat into phases, introducing changes in certainty and severity at different times, and analyzing the results.

Certainty of threat is unavoidably linked to enforcement issues such as available resources and the desire to avoid the side-effects of intensive patrols for drinking drivers. Perhaps the crucial experiment here would be to raise the level of actual certainty of apprehension to the bounds of political and financial possibility and hold it there over a reasonably long time, to see whether the return to the status quo ante found in all the reports surveyed here can be avoided, at least in part.

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NEWSNOTES

DWI Arrests Costly to Offenders

If MADD, RID, AAA, and similar organizations fail to deter a drinking driver, BROKE might do the trick. "Broke" is how several recently published accounts indicate a drunk driving incident can leave offenders.

The newsletter of the Michigan Council on Alcohol Problems (MICAP) told the story of Bill Bradley, a Michigan resident who drank too much one night in Toledo, Ohio. Bradley (a fictitious name for a real person with a real problem) was arrested for driving while intoxicated (DWI).

Following conviction, Bradley faced the consequences—suspended Ohio driving privileges, a $200 fine, and 3 days in a Toledo jail. He went home to Detroit to forget about the whole unhappy affair. But he had barely *begun* to pay, according to the MICAP officials. When Ohio notified Michigan of his moving violation, Bradley found his driving privileges revoked for 90 days in Michigan; his insurance coverage, initially cancelled, but later raised from $912 to $1,916 annually; and another $300 in expenses for attorney fees, fines, and court costs. His higher auto insurance premiums would continue for 3 years, placing his extra financial costs for that single drunk driving conviction at approximately $4,000.

All in all, though, MICAP officials suggest that Bradley got a return on his investment. "Bill Bradley is not likely soon to forget his lesson on the costs of drunk driving," they write.

Along the same line, the Sacramento County, California, affiliate of the National Council on Alcoholism provides a handy chart calculating the cost of a drunk driving conviction in that State.

Private Sector Initiatives To Reduce Drunk Driving

The American Automobile Association (AAA) has been involved in seeking solutions to the drunk driving problem for two decades. In 1964, the AAA Foundation for Traffic Safety provided funding to Columbia University's Teachers College to initiate the Safety Research and Education Project. This project focused on determining the most effective means of attacking the problem of drunk driving. In 1966, working with officials in Phoenix, Arizona, a full scale DWI Counterattack Program was launched to reeducate and rehabilitate persons convicted of driving while intoxicated (DWI), as an alternative to punishment alone. The DWI school that evolved became the model for widespread efforts across the Nation. AAA Foundation developed special curriculum materials for DWI programs as well as training materials for staff.

Recently, AAA Foundation-sponsored researchers have changed their emphasis from rehabilitation to prevention, focusing on young people in particular. In 1974-75, the AAA Foundation's *DWI Mini-Course for High School Driver Education Programs* was developed at Columbia University. The course emphasizes the influence of alcohol on driving skill, capitalizing on the inherent interest of teenagers in driving, in order to communicate the total influence of alcohol on human functions and to provide experiences that preclude drinking and driving tragedies.

While developing and field-testing the high school DWI course, it became apparent that for some youngsters the program might have been presented too late in their development, according to AAA Foundation Director Sam Yaksich. In 1976-77, the Junior High School Program in Alcohol Education and Traffic Safety was developed. The program was field tested with 6,000 students nationwide, and results were favorable in terms of changing students' DWI knowledge, attitudes, and behavioral intentions in DWI situations they encountered (mostly as passengers).

Many educators and other professionals interested in child development believe that the earlier alcohol education begins, the more effective it is likely to be, Yaksich reported. Thus, a special study team at Teachers College, Columbia University, with AAA Foundation sponsorship, recently developed an alcohol and traffic safety education program for children in kindergarten through sixth grade. This new module was field tested in schools in eight States, and was released nationwide in 1981.

While young people are undeniably at high risk for alcohol-related crash involvement, senior adults (55 and over) are also disproportionately involved in traffic fatalities, especially as pedestrians, Yaksich noted. Consequently, in 1976-77, a miniprogram (a 10-minute film and a short, supplementary take-home pamphlet) highlighting senior adult alcohol traffic hazards and countermeasures was developed. The program was field tested at senior citizen centers and other appropriate places in 10 States. Senior adults exposed to the program, when compared with

Potential Extra Costs To Driver First Offense—DUI Conviction

Items of out-of-pocket expense to driver (variable)	Estimated approximate, or average
Towing and storage of vehicle	$ 75
Deductible on repair of driver's car	100
Bail, when required (percentage only)	50
Loss of 1 day's work time ($10 per hour)	80
Attorney's fee, when required	400
Night out drinking before arrest	100
High risk auto insurance ($1,100 x 3 years)	3,300
Possible total (not including minimum $375 mandatory fine nor any added costs of a jury trial)	$4,105

F.A. Meister, President of the Distilled Spirits Council of the U.S., Inc. (DISCUS), noted that it was industry funding that enabled the development of breathalizer test devices that are now used almost nationwide. DISCUS has cooperated with the Department of Transportation (DOT) on preventive education programs, including a National Football League-DISCUS-DOT cooperative project this year that features Dallas Cowboy Drew Pearson in TV, radio, and magazine ads advising teenagers of the dangers of drinking and driving. Meister stressed that the industry is working to correct public misunderstanding about the relative risk to driving associated with various forms of beverage alcohol. A large new printing of the "Know Your Limits" card, developed in 1968 by health and traffic safety agencies, is planned as is wide distribution of the card by DISCUS and by leading traffic safety groups.

The Highway Users Federation Dealers Safety and Mobility Council has initiated a new program on drinking and driving, offered through 8,000 car, truck, and tire dealers who are council members. A 13-minute filmstrip, "One Drink Too Many," is available free to community groups. The filmstrip is accompanied by a leader's guide, designed to assist the audience in discussing the problems associated with DWI and what citizens might do to address these problems, according to Marvin D. Hartwig, chairman of the council.

National Conference Focuses On Alcohol and Traffic Safety

More than 500 representatives of the alcohol and traffic safety fields attended a recent National Conference on Occupant Protection and Alcohol Countermeasures in Detroit to seek solutions to what one speaker called the two great highway safety problems facing the Nation—driving while intoxicated and occupant protection.

The conference included 2½ days of presentations, workshops, and discussions on ways the United States can reduce injury and death on its highways. Attendees heard from representatives of the National Safety Council and other private groups; universities; Federal, State, and local governments; and alcohol treatment, prevention, and education programs as well as scores of private citizens who have become involved in these issues in their local communities.
those who were not, became more aware of the reasons for their high vulnerability to traffic fatalities and more committed to alcohol and driving countermeasures they would take.

A wide range of initiatives aimed at reducing drunk driving has also been launched by volunteer groups and businesses in the private sector.

Government Employees Insurance Company (GEICO) of Washington, D.C., and Comprehensive Care Corporation, a California-based provider of alcoholism treatment, currently sponsor free taxicab programs for drivers who become intoxicated. Under Project LIFT (Leave in a Free Taxicab), employees of GEICO may call a taxi for themselves, a family member, or a friend or party guest who has had too much to drink. The company will reimburse up to $25 of the fare per ride with no questions asked. Under the CareCab program, residents of Los Angeles, Washington, D.C., Memphis, Miami, or St. Louis can call a participating CareUnit Hospital for a free taxicab ride home.

GEICO has also implemented several other prevention initiatives. They include speaking programs to carry the safety message to individual community groups and to professional insurance organizations; participation on local drunk driving task forces and efforts to encourage establishment of county and State task forces in many areas; and special safety publications and materials distributed to the mass media.

Members of the General Federation of Women's Clubs (GFWC) are involved in local anti-drunk-driving campaigns. In addition, Mrs. Don L. Shide, GFWC president, said members are cooperating in making available "One Drink Too Many," a slide show that offers intervention techniques for friends and hosts of someone who has drunk too much.

The U.S. Brewer's Association has recently developed a television and radio public service campaign, featuring young actress Kristy McNichol, who urges young people to "Think Twice" about drinking and driving.

The conference began with a speech by Chuck Hurley of the National Safety Council who told participants that "there is no one group that has the ability to solve these problems—not the Federal or State Government and not the private sector by itself." The key, he said, is a massive education effort by all groups to inform the public that these problems are not only serious but solvable. Separate concurrent sessions on alcohol and occupant safety topics were offered. Presentations and workshops dealing with alcohol topics ranged from a discussion of prevention and education issues to descriptions of specific countermeasures that State and local governments are using to combat drunk driving.

Compiled by Jill Vejnoska, Staff Writer

Ex. F
2-10-83
H.B. 540

Department of Justice

MONTANA HIGHWAY PATROL

February
16
1983

Representative Dave Brown
State Capitol Building
Helena, Montana 59620

Dear Representative Brown:

The incidence of teenage involvement in traffic accidents is becoming a major concern. This is especially true in alcohol related accidents. Teens comprise 19.7% of the total drivers involved in accidents. 22.6% of Montana's fatalities in the first nine months of 1982 were teens.

Of the drivers in fatal accidents who had been drinking, 22.7% were young people between 14 and 19. The number of teenage drivers in Montana is unknown. Nation-wide teenagers compose only 8% of the driving population. As inexperienced drinkers and inexperienced drivers, this age group is out proportioned to other age groups in accident statistics.

Sincerely,

Gordon Hage

GORDON HAGE, Chief
Accident Records Bureau

GH:sam

HOUSE

MINUTES OF THE JUDICIARY COMMITTEE
February 17, 1983

The House Judiciary Committee meeting was called to order by Chairman Dave Brown at 9:06 a.m. in room 224A of the capitol building, Helena, Montana. All members were present except for Representative Seifert, who was excused. Brenda Desmond, Staff Attorney for the Legislative Council, was also present.

HOUSE BILL 540

This bill revises and extends the geographical application of the laws prohibiting driving under the influence of alcohol or drugs, making it an offense to drive a motor vehicle with a blood alcohol concentration of more than .10; and providing for the admissibility of evidence.

REPRESENTATIVE KEYSER moved that this bill DO PASS. REPRESENTATIVE BERGENE seconded the motion.

REPRESENTATIVE ADDY moved to amend the bill on page 6, line 17, by striking "60 days" and insert "6 months". REPRESENTATIVE DARKO seconded that motion.

REPRESENTATIVE RAMIREZ stated that he thought they were getting off the track of the purpose of this bill; there is a real fundamental question when you make changes like this and you really have not had a hearing on the bill; there is really nothing in the title that refers to this; he guessed they could do it, but it seems to him to be getting away from what the bill is designed to do.

CHAIRMAN BROWN indicated that he agreed.

REPRESENTATIVE ADDY explained that this was in response to a question that he asked Representative Vincent during the hearing; we are making the threshold for a conviction of a dui much lower; and, therefore, increasing the incentive for a person to decline to take a breathalyzer test; and unless we increase the penalties for declining to take a breathalyzer test, they may very well be doing nothing.

REPRESENTATIVE KEYSER wondered why they are making this lower.

REPRESENTATIVE ADDY responded that on a dui, he thought that they were making it a simpler case for them to prove; all they have to prove is a .10 blood alcohol content and they have a conviction; in the past, they had to prove .10 and that led to a certain rebuttable presumption; but they also had to prove that that person was drunk at .10 blood alcohol level. He contended that as they lower the threshold for a conviction, they are increasing the incentive for a person to decline to take a breathalyzer test. He commented that you can do 60 days without a license standing on your head; and he felt that this bill said, if you are drunk, you should be convicted of a dui.

REPRESENTATIVE HANNAH asked if there was a 60-day penalty on the books right now for not taking the breathalyzer test.

REPRESENTATIVE KEYSER replied that that is right - the implied consent law that has been upheld by the Montana Supreme Court numerous times.

REPRESENTATIVE HANNAH asked if he got picked up right now and refused to take the breathalyzer test, does he lose his license for 60 days.

REPRESENTATIVE KEYSER replied after an affadavit is sent in.

REPRESENTATIVE HANNAH asked what would happen if he gets picked up, takes the breathalyzer test and his blood alcohol content is above .10.

CHAIRMAN BROWN replied that it would be a 24-hour mandatory sentence for the first offense.

REPRESENTATIVE HANNAH asked how does the 60 days relate to the changes in this bill.

CHAIRMAN BROWN replied that it doesn't and he does not believe that this amendment is appropriate to this bill; it is his opinion that this amendment is well outside the scope of the title of this bill and he did not believe that they could, in good conscience, change it without some kind of a public hearing in that area.

A vote was taken on the motion and the motion failed with REPRESENTATIVE ADDY voting yes.

REPRESENTATIVE EUDAILY made a motion that they amend the bill on page 4, line 13, following "alcohol." insert "Such presumption is rebuttable." REPRESENTATIVE JENSEN seconded the motion. The motion carried with REPRESENTATIVE HANNAH and REPRESENTATIVE KEYSER voting no.

REPRESENTATIVE RAMIREZ moved to amend this bill on page 2, line 15, by striking "61-9-714(1)" and insert [section 8] and then insert a new section 8, which would be the penalty for driving with alcohol concentration of .10. He explained that he wants to have penalties of not more than 10 days in jail and not less than $100.00 to $500.00 for the first offense, and not more than 30 days and $300.00 to $500.00 for the second offense, and not more than 6 months and $500.00 to $1,000.00 for the third offense. He stated that they might as well strike section 2 for the second offense right out of the books as far as he is concerned, because who is ever going to prosecute for dui when they can prosecute for the per se and have the same penalty; what you are doing now is they are changing the penalty to all those minimum mandatory sentences, but they are also now saying that anyone with .10, they are guilty; in fact, they don't even have to bring the lab technician down - it is in the lab report and that is it; and it just seems to him that there should be a difference in penalty on those two things - that the driving under the influence where your behavior is truly affected and they can prove your behavior is affected should carry with it a real severe penalty; but if they are going to let them prosecute someone for just .10, and they are guilty, he thinks they should have a less severe penalty. He commented that these are certainly not real easy penalties that he proposed, and he doesn't have any strong feelings about them; but he didn't think, especially on the first offense, they should get on this minimum mandatory thing for being convicted of this offense, which is much, much different to him than driving under the influence.

REPRESENTATIVE ADDY seconded the motion and asked why he wanted the minimum mandatory fine for the second offense.

REPRESENTATIVE RAMIREZ responded that the fine doesn't bother him; he still thinks people shouldn't drive when they have .10; but he will amend his motion to take off the minimum fines; i.e. not more than 10 days in jail or not more than $500.00 for the first offense; the second offense not more than 30 days and not more than $500.00; and for the third offense not more than 6 months and not more than $1,000.00. REPRESENTATIVE ADDY seconded the motion. The motion carried unanimously.

REPRESENTATIVE EUDAILY commented that the language "anywhere in the state" is really a broad term; and he does not know how you can correct it; he has some problems with a person sitting in his own driveway, not going anyplace and he hasn't turned the car off.

REPRESENTATIVE KEYSER indicated that was one of the questions that he raised at the hearing; he asked them specifically if they had some cases; and the testimony was that no supreme court cases have ever overturned this.

REPRESENTATIVE ADDY suggested that where it says, "anywhere in the state" they strike that language and insert "upon the highways of the state".

REPRESENTATIVE EUDAILY responded that they gave examples of parking lots, public parking lots, around the malls, and things like that; and he felt that they do have a problem there.

REPRESENTATIVE ADDY advised that there was an accident at the Rimrock Mall parking lot about a year ago, wherein some guy hit six or seven cars and did $10,000.00 worth of damage; they called the police and the police told them that they didn't have jurisdiction.

REPRESENTATIVE RAMIREZ said that they do not have jurisdiction - they will not even investigate an accident in a parking lot.

REPRESENTATIVE KEYSER explained that back in 1957 or 1958, the language allowed for an arrest for D.W.I. any place - even on private property, on a person's field, any place; as the D.W.I.law was weakened and sentences were reduced, that language was eventually taken out and replaced with the language they have here; but that use to be the language and they operated under that language and apparently, at that time, they never lost in a supreme court decision.

REPRESENTATIVE DAVE BROWN indicated that he would have an amendment prepared to propose when this bill gets on the floor. He also suggested an amendment on page 2, line 21, following "a" to insert "moving"; and he said that his concern is if a guy comes out of Jorgensons, who was a little inebriated, gets into his car and goes to sleep, he can be arrested under this statute if he put the key in the car, turns it on and lets the motor run so he can keep warm. He indicated that he felt that moving vehicles were the problem and he asked if it creates a problem if some guy pulls off to the side of the highway.

REPRESENTATIVE KEYSER informed the committee that in Billings, a psychiatrist was in a car, the motor was running; the door was locked; he would not open the door for the officers; it was proven later that he was drunk; and they finally went and got a wrecker, lifted the car up and took it to a safe spot. He said he did not know how he finally got out of there, but that went to the supreme court.

REPRESENTATIVE DAVE BROWN moved that they amend this bill as he suggested. REPRESENTATIVE JENSEN seconded the motion.

REPRESENTATIVE SPAETH stated that he has some problems with "moving" such as an individual who would pull into one of the check stations; and they have had a lot of problems with what is moving and what is not moving.

REPRESENTATIVE ADDY said that he had a client who was parked on the shoulder of the interstate, who was parked on the wrong lane; and he would not be in violation of a D.U.I.

REPRESENTATIVE JENSEN indicated that there are a lot of vehicles these days in which the front seat is designed to be slept in; he can see some problems with a stationary vehicle, but he is really concerned about people driving while drunk.

REPRESENTATIVE DAILY said that they could talk about this thing forever and no matter which way they go, somebody is going to get burned.

A vote was taken on the amendment and it failed with 11 voting no and 7 voting yes. See ROLL CALL VOTE.

REPRESENTATIVE KEYSER moved that the bill DO PASS AS AMENDED. REPRESENTATIVE ADDY seconded the motion. The motion carried with REPRESENTATIVE IVERSON, REPRESENTATIVE JENSEN, REPRESENTATIVE KENNERLY and CHAIRMAN BROWN voting no.

HEARING SESSION

HOUSE BILL 774

REPRESENTATIVE ADDY stated that this is an act which creates a certification process for court reporters in the state of Montana.

JEROME ANDERSON, representing the Montana Shorthand Reporters' Association, stated that he represented some 66 shorthand reporters in the state and they use a particular method of recording court proceedings, administrative proceedings, depositions, etc. He indicated that some are official reporters appointed by the judicial judges and other are free lance reporters.

JULIE LAKE, representing the Montana Shorthand Reporters' Association in Missoula, passed out an example of what their shorthand looks like. See EXHIBIT A.

There were no further proponents and no opponents.

REPRESENTATIVE ADDY pointed out that Mr. Abley was here from the supreme court; they have reviewed the legislation and are in support of the measure.

REPRESENTATIVE VELEBER asked if there were any court reporter schools in Montana. MS. LAKE responded that Montana does not have any court reporter schools.

STANDING COMMITTEE REPORT (1 of 3)

February 17 19 83

House

MR. SPEAKER:

We, your committee on JUDICIARY

having had under consideration HOUSE Bill No. 540

FIRST reading copy (white)
Color

A BILL FOR AN ACT ENTITLED: "AN ACT REVISING AND EXTENDING THE GEOGRAPHICAL APPLICATION OF THE LAWS PROHIBITING DRIVING UNDER THE INFLUENCE OF ALCOHOL OR DRUGS; MAKING IT AN OFFENSE TO DRIVE A MOTOR VEHICLE WITH A BLOOD ALCOHOL CONCENTRATION OF MORE THAN .10; PROVIDING FOR THE ADMISSIBILITY OF EVIDENCE; AMENDING SECTIONS 61-8-101 AND 61-8-401 THROUGH 61-8-404, MCA; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE."

Respectfully report as follows: That HOUSE Bill No. 540

BE AMENDED AS FOLLOWS:

1. Title, line 8.
Following: ".10"
Insert: "AND PROVIDING PENALTIES FOR THAT OFFENSE"

2. Title, line 9.
Following: "61-8-101"
Strike: "AND"
Insert: ","

3. Title, line 10.
Following: "61-8-404"
Insert: ", AND 61-8-714"

4. Page 2, line 20.
Strike: "61-8-714 (1)"
Insert: "61-8-714(2)"

DO PASS

DAVE BROWN, Chairman.

STATE PUB. CO.
Helena, Mont.

5. Page 4, line 13.
Following: "alcohol."
Insert: "Such presumption is rebuttable."

6. Page 9, following line 12.
Insert: "Section 6. Section 61-8-714, MCA is amended to read:
"61-8-714. Penalty Penalties for driving with excessive blood alcohol concentration and for driving while intoxicated.

(1) (a) A person convicted of a violation of 61-8-401(1) shall be punished by imprisonment in the county jail for not more than 10 days and shall be punished by a fine of not more than $500.

(b) On a second conviction of a violation of 61-8-401(1), he shall be punished by imprisonment in the county jail for not more than 30 days and by a fine of not more than $500.

(c) On a third or subsequent conviction of a violation of 61-8-401(1), he shall be punished by imprisonment in the county jail for not more than 6 months and by a fine of not more than $1000.

(2) (a) A person convicted of a violation of ~~61-8-401~~ 61-8-401(2) may, in the discretion of the court, be punished by imprisonment in the county jail for up to 24 hours, and shall be punished by a fine of not less than $100 or more than $500. The jail sentence may not be suspended unless the judge finds that the imposition of the jail sentence will pose a risk to the defendant's physical or mental well-being.

(2) (b) On a second conviction of a violation of 61-8-401(2), he shall be punished by a fine of not less than $300 or more than $500 and by imprisonment for not less than 7 days or more than 30 days. Three days of the jail sentence may not be suspended unless the judge finds that the imposition of the jail sentence will pose a risk to the defendant's physical or mental well-being.

(3) (c) On the third or subsequent conviction of a violation of 61-8-401(2), he shall be punished by imprisonment for a term of not less than 30 days or more than 1 year, to which may be added, in the discretion of the court, a fine of not less than $500 or more than $1000. Notwithstanding any provision to the contrary providing for suspension of execution of a sentence imposed under this sub-section, the imposition or execution of the first 10 days of the jail sentence imposed for a third or subsequent offense that occurred within 5 years of the first offense may not be deferred or suspended.

Chairman.

STATE PUB. CO.
Helena, Mont.

(4) (3) In addition to the punishment provided in this section, regardless of disposition, the defendant shall complete an alcohol information course at an alcohol treatment program approved by the department of institutions, which may include alcohol or drug treatment, or both, if considered necessary by the counselor conducting the program. Each counselor provising such education or treatment shall, at the commencement of the education or treatment, notify the court that the defendant has been enrolled in a course or treatment program. If the defendant fails to attend the course or the treatment program, the counselor shall notify the court of the failure.

(5) (4) For the purpose of determining the number of convictions under this section, "conviction" means a final conviction, as defined in 45-2-101, or a forfeiture of bail or collateral deposited to secure the defendant's appearance in court, which forfeiture has not been vacated. An offender is considered to have been previously convicted for the purposes of this section if less than 5 years have elapsed between the commission of the present offense and a previous conviction. If there has been no additional conviction for an offense under this section for a period of 5 years after a prior conviction hereunder, then such prior offense shall be expunged from the defendant's record."

when it is time to draft a bill, they have an educated person on this bill. He felt that this would not cause any problems and Ms. Dowling could limit that input as little or as great as she wants.

MS. DESMOND said that she could speak of the time that Lee Heiman spent on the evidence study - he did spend time over two years, but she thought that the bulk of the work was done by the supreme court on the study that led up to the bill; and she did not feel that it took an inordinate amount of his time.

REPRESENTATIVE EUDAILY said that his problem is with the word "staff"; if it were "assistance" or something like that he would like it better; he felt the responsibility could be put on the staff attorneys of the Legislative Council the way it reads - maybe that is not what they mean and it probably is not, but it bothers him.

CHAIRMAN BROWN stated that he did not see a big problem there.

There was no further discussion and a vote was taken. The motion carried unanimously.

HOUSE BILL 540

REPRESENTATIVE BERGENE moved that they CONCUR IN the Senate amendments to this bill. The motion was seconded by REPRESENTATIVE FARRIS.

MS. DESMOND explained that the new crime of per se, driving with more than .10 blood alcohol concentration was included in this bill as it was originally drafted in section 61-8-401, which is section 3 of the bill and makes driving under the influence of alcohol a crime. She said, as originally drated, there was a subsection put in making driving with .10 blood alcohol concentration in the blood a crime; then in the penalty

section for driving under the influence, which is 61-8-714, there was a separate subsection added in for driving with .10 blood alcohol concentration. She indicated that the Senate Judiciary Committee simply pulled out that crime and that penalty from the existing statutes; and in section 2 at the bottom of page 3, they have reinserted the language as originally drafted setting up the crime of per se. She continued that on the bottom of page 11, this sets up a separate section for the penalty for driving with more than .10 blood alcohol concentration. She explained that it was her understanding that this was done simply because, as originally drafted, it was felt to be awkward having to go from subsection to subsection for the crime and the penalty.

She further explained that, as originally drafted, the first offense on the bottom of page 11 and the rest of page 12 are where the penalties are for per se crime. She stated that the penalties for the first offense were originally not more than ten days and not more than $500.00; that would be the same, but the penalties for the second offense, which were originally not more than thirty days and not more than $500.00 were changed to not less than 48 consecutive hours or more than 30 days and not less than $100.00 and not more than $500.00. She noted that originally the third offense was not less than six months and not more than a fine of $1,000.00, which now says not less than 48 consecutive hours or more than six months and not less than $300.00 or more than $1,000.00.

She continued that on the bottom of page 6, section 4, the Senate added language that states, "Wnen the same acts may establish the commission of an offense under both (section 2) and 61-8-401, a person charged with such conduct may be prosecuted for a violation of both (section 2) and 61-8-401. However, he may only be convicted of an offense under either (section 2) or 61-8-401." She explained that section 2 is the per se violation and 61-8-401 is driving under the influence; a person may be prosecuted for both of these crimes; in other words, a complaint may be filed against him for both of these crimes, but a person can only be convicted of one of them.

She further indicated that the language "upon the ways of the state open to the public" has been inserted throughout the bill.

CHAIRMAN BROWN noted that they amended HB 260 and took out the language which says "with the expressed and implied consent", and if HB 260 passes and this one passes, which one would prevail, he asked. MS. DESMOND replied that she thought this one would prevail.

REPRESENTATIVE KEYSER stated that he would disagree with the motion to concur in these amendments, because of the new section that the Senate put in there dealing with the penalties on page 12 of the salmon-colored bill in subsection 2, wherein it says the conviction will be two days or more than thirty days and the fine is basically the same as in the first conviction and on the first offense, they can get up to ten days. He contended that, if you are really trying to stop the repeater, that doesn't even sound reasonable to him. He felt the third was about the same way "not less than 48 consecutive hours", but they did raise that fine. He said that is just two days and he has problems with that area.

CHAIRMAN BROWN indicated that Representative Vincent desires that they not concur in the Senate amendments and have it go to a conference committee.

REPRESENTATIVE ADDY asked if there was some federal guidelines they were trying to comply with and he wondered about the penalties. DUANE TOOLEY, Chief of the Driver Services of the Department of Justice, said that they felt it would comply; there are other problems with it, but that isn't one. He indicated that on page 8, lines 22 and 23, it would appear that the amendment added there would suspend the license only in Montana; on page 10, there did seem to be a problem in numbering; and it appears to arrange the test so that you cannot get a per se unless you go through the laboratories. He felt that should have an "or" in there.

COLONEL ROBERT LANDON, Chief Administrator of the Highway Patrol Division of the Department of Justice, advised

that most of these tests will be given by breath-testing devices; they will not be going to the laboratories in the form of blood or urine samples, so, therefore, it is important to put the "or" in. He further said that he agrees with Representative Keyser's position on penalties on subsection 2 and 3 on page 12; and in addition to that, he is concerned about the first section where it does not require a person to serve time in jail. He noted that they have HB 250, that has passed that requires 24 hours in jail and, under the per se conviction, the person would not be required to go to jail to serve the time; so this creates a real problem. He contended that it creates a discretion on the part of the officer; he should charge someone and the discretion be on the part of the county attorney or the judge - it should not be on the part of the officer; then they have the situation where a person can be arrested; and a test would not be available and that person could only be charged under the traditional dui statute and, therefore, if he was convicted, then he would have to go to jail; and if a test were afforded, he may not have to go to jail, because they could be charged under the per se section. He thought, to be consistent, that they should just add the 24 hour penalty to that section so that a new section on section 9 would read, "penalties for driving with excessive blood alcohol concentrations, a person convicted of a violation of section 2 shall be punished by imprisonment for not less than 24 consecutive hours or more than 10 days in jail" and this would be consistent with HB 250.

REPRESENTATIVE SPAETH noted that under HB 250, you can go ahead and get a conviction under that and go for the 24 hours anyway, he wondered what was the difference there and why would they necessarily want this to be consistent with that. COLONEL LANDON replied that maybe he does not fully understand HB 250, but he thought that upon conviction of a charge of DUI, a person must serve 24 hours in jail; under this bill, if a person is charged under the per se portion, then upon conviction, they would not serve the 24 hours; he thought this was inconsistent where in one place, he would have to serve and in the other, he would not have to serve and this based on the fact that he was or was not given the test. He indicated that, in some places, the test

just would not be available.

REPRESENTATIVE SPAETH asked if there was a greater degree of proof required under HB 250 than is required under per se. COLONEL LANDON responded not in his judgment; he thought that per se is the best evidence available for a chemical test; the other tests and information is based on the officer's observations of a person's pyschophysical skills; he may or may not be impaired and there is a human judgment factor. He felt the best evidence is the chemical analysis, rather than the traditional charts.

REPRESENTATIVE EUDAILY noted on page 2, lines 2 through 6, that they have changed "upon the ways of the state open to the public" back to "anywhere within this state"; this only deals with drugs, but he wondered why this would be any different. MS. DESMOND replied that the reason that was changed was because in present law, there is a distinction made between driving under the influence of drugs, which is a crime anywhere within the state, (she presumes that is because drugs are illegal) and a distinction between driving under the influence of alcohol. She advised that in the course of amending this, when it was in the House, that distinction was blurred and she did not think it was the intention to restrict the application of driving under the influence of drugs.

REPRESENTATIVE KEYSER made a substitute motion that they DO NOT CONCUR in the Senate amendments. REPRESENTATIVE ADDY seconded the motion.

CHAIRMAN BROWN pointed out that the Senate is coming from a position that dui crimes are much worse than per se crimes; and they basically do not like the per se crimes. He noted that they have a choice of passing the Senate amendments; sending to the Governor a bill that will never work or they can go to a free conference committee, where it will probably die anyway.

A vote was taken on the motion BE NOT CONCURRED IN and the motion carried with REPRESENTATIVE IVERSON, REPRESENTATIVE FARRIS and REPRESENTATIVE DAVE BROWN voting no.

There being no further business, REPRESENTATIVE KEYSER moved that the meeting be adjourned at 11:07 a.m.

Dave Brown
DAVE BROWN, Chairman

Alice Omang
Alice Omang, Secretary

STANDING COMMITTEE REPORT

April 5, 19 83

MR. SPEAKER:

We, your committee on JUDICIARY

having had under consideration SENATE AMENDMENTS TO HOUSE Bill No. 540

Third reading copy (Blue color)

AN ACT REVISING AND EXTENDING THE GEOGRAPHICAL APPLICATION OF THE LAWS PROHIBITING DRIVING UNDER THE INFLUENCE OF ALCOHOL OR DRUGS; MAKING IT AN OFFENSE TO DRIVE A MOTOR VEHICLE WITH A BLOOD ALCOHOL CONCENTRATION OF MORE THAN .10; PROVIDING FOR THE ADMISSIBILITY OF EVIDENCE; AMENDING SECTIONS 61-8-101 AND 61-8-401 THROUGH 61-8-404, MCA; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE."

Respectfully report as follows: That SENATE AMENDMENTS TO HOUSE Bill No. 540

BE NOT CONCURRED IN

DAVE BROWN, Chairman

STATE PUB. CO.
Helena, Mont.

COMMITTEE SECRETARY

48th LEGISLATIVE SESSION

COMMITTEE ON Senate Judiciary

BILL NO.	ENTERED COMM.	DATE CONSIDERED	OUT OF COMM.	DO NOT DATE	DO NOT PASS DATE	DO PASS AS AMEND. DATE	BE CONCURRED IN DATE	BE CONC. IN AS AMENDED DATE	BE NOT CONCURRED IN DATE
524	2-14-83	3-15-83	TABLED						
530	2-18-83	3-14-83	3-14-83				3-14-83		
531	3-1-83	3-14-83	3-14-83				3-14-83		
532	3-1-83	3-14-83	3-14-83				3-14-83		
533	2-17-83	3-14-83	3-14-83				3-14-83		
540	3-2-83	3-23-83	3-24-83				3-24-83		
546	2-15-83	3-10-83	3-10-83				3-10-83		
562	2-16-83	3-7-83	3-12-83				3-12-83		
565	3-1-83	3-24-83	3-24-83					3-24-83	
575	2-18-83	3-7-83	3-10-83					3-10-83	
577	2-17-83	3-4-83	3-7-83				3-7-83		
584	2-16-83	3-15-83	TABLED						
588	3-17-83	3-21-83	TABLED						
589	3-3-83	3-7-83	3-7-83						3-7-83
608	2-17-83	3-24-83	3-24-83				3-24-83		
609	2-18-83	3-24-83					3-24-83		

(Use Separate Sheet for Senate, House Bills, and Resolutions)

MINUTES OF MEETING
SENATE JUDICIARY COMMITTEE
March 23, 1983

The fiftieth meeting of the Senate Judiciary Committee was called to order by Chairman Jean A. Turnage at 10:05 a.m., on March 23, 1983, in Room 325, State Capitol.

ROLL CALL: All members were present.

CONSIDERATION OF HOUSE BILL 540: Representative Vincent, sponsor of the bill, testified that HB540 is a significant piece of legislation which will help Montana law enforcement officers and benefit Montana citizens. Representative Vincent explained that under Montana's present laws, if you are arrested for DUI, you first submit to some type of chemical test to determine the blood-alcohol level. Many times a Defendant will testify in court that even though his blood-alcohol level was over that necessary to constitute DUI, he was still in control of his senses. Representative Vincent informed the committee that in addition to submitting to a chemical test, law enforcement officers often have the suspect walk a straight line, recite the alphabet or touch his finger to his nose, to determine the degree of intoxication. Representative Vincent testified that many persons are acquitted of a DUI charge when they passed the physical tests but failed the chemical test. HB540 would alleviate this and the court would only be allowed to consider the blood-alcohol level as evidence. Representative Vincent believes the chemical test, if applied fairly, should be sufficient evidence for a court to convict a person on DUI. Representative Vincent stated that although HB540 is a complex bill, 28 states have similar laws in effect, with one state using a blood-alcohol level of .018 as the means for considering a person legally intoxicated.

PROPONENTS: Mr. Steven Johnson, Assistant Attorney General, submitted written testimony (see attached Exhibit "A") and testified that the Attorney General supports HB540, because it will increase the number of convictions of DUI's and decrease the amount of time and money involved in obtaining a conviction. Mr. Johnson stated that HB540 will provide for a new offense not presently contained in our current DUI laws. He testified HB540 makes two significant changes to our current law:

1. HB540 provides for a new offense by making it illegal to drive a motor vehicle with a blood-alcohol concentration of .10 or more; and

2. It provides for the admissibility of lab reports showing the blood-alcohol level as evidence in trial.

Mr. Johnson testified that because of the admissibility of this evidence at trial, the State will save a considerable amount of money because the lab technicians themselves will not have to make an appearance at trial. HB540 sets forth a direct requirement of varification of all signatures on these lab reports. Mr. Johnson testified that this is a major difference between our current laws and the proposed law in HB540, as the current law relies on a behavioral test and the new law would rely on a chemical test. Mr. Johnson testified that HB540 is based on the Uniform Vehicle Code per se statute. He informed the Committee that because of the legal per se laws are so difficult to defend, there would be an increase of guilty pleas and a speedier resolution of cases.

Mr. Ronald Yates, representing Montanan's Against Drunk Drivers, submitted written testimony (see attached Exhibit "B") supporting HB540. Mr. Yates testified that in Missoula County last year, 12 out of 20 auto fatalities were alcohol related, as were 9 of the 13 accidents occurring in Lake County. Mr. Yates feels that the Legislature and law enforcement are the keys to making our laws work. He also believes that if HB540 becomes law, police officers will be more willing to make arrests, knowing that they have a better chance of obtaining a conviction. Mr. Yates stated that he feels the necessary .10 blood-alcohol level is too lenient. He also feels that use of the chemical test will provide uniformity in convictions throughout the state. Mr. Yates also testified that HB540 will allow an officer to arrest a DUI suspect on private property where, under the current law, he cannot do so.

Mr. Jim Nuggent, Missoula City Attorney, submitted written testimony (see attached Exhibit "C") in support of HB540. He stated that the passage of HB540 would make Montana elligible for federal money that, under our present law, is not available to us. Mr. Nuggent testified that this money would amount to approximately $300,000 a year for a period of three years to aid our DUI programs. Mr. Nuggent suggested the Committee amend HB540 to include public property such as parks and railroad property.

Mr. Ken Largin, representing Montanan's Against Drunk Drivers in Mineral County, submitted written testimony (see attached Exhibit "D") and testified in favor of HB540. Mr. Largin stated that no one can drive safely when their blood-alcohol level is .10, and it is time for everyone to accept this scientific fact. Mr. Largin stated that with the federal money Montana would be elligible for, we could better educate the public. Mr. Largin feels that children especially need to be educated about alcohol, so they can gow up to be responsible adults. Mr. Largin feels the DUI problem should receive more attention.

Mr. Michael Wood, Director of Health Education for the Missoula County Health Department, submitted written testimony (see attached Exhibit "E") and suggested that a .10 alcohol-blood level does not reflect a social drinker. Mr. Wood reminded the Committee that driving is a privilege and not a right. Mr. Wood is of the opinion that since driving without a valid driver's license is illegal per se, driving while under the influence should also be illegal per se. Mr. Wood feels that HB540 will send a message to the public that if you drive while under the influence of alcohol and get caught, you will most likely be convicted. Mr. Wood also feels that HB540 will increase the number of quilty pleas obtained from persons who have been arrested for DUI, but should not affect the social drinker. Mr. Wood feels that SB313, SB250 and HB540 together will help strengthen Montana's DUI laws and provide a long-term solution to the problem.

Cathy Campbell, representing the Montana Association of Churches, testified that she supports HB540.

Col. R. W. Landon, representing the Montana Highway Patrol, testified that heart disease and cancer are the only other things that kill more Montanan's than drunk drivers. Col. Landon believes that if HB540 passes, Montana will have the strongest DUI laws in the United States, Col. Landon suggested the Committee amend HB540 to include private property, since the majority of the public doesn't understand why the Highway Patrol is unable to make arrests of public property.

Justice Mike McCabe, Justice of the Peace, in Helena, testified that he has had much experience in trying DUI cases. Justice McCabe testified that the presumption contained on pp. 3-4 will aid in giving jury instructions to jury members. Justice McCabe feels, however, there will still be a substantial amount of testimony and witnesses testifying as to the behavior of the Defendant. Justice McCabe also informed the Committee that members of the jury also question why the blood-alcohol level is not submitted as evidence in a trial.

Mr. Ben Havdahl, from the Montana Motor Carrier's Association, testified that truck drivers are concerned with drunk drivers because of the number of trucks that become involved in alcohol related accidents. Their Association supports HB540.

Ms. Betty Wing submitted written testimony (see attached Exhibit "F") in support of HB540.

There being no further proponents and no opponents, the hearing was opened to questions from the Committee.

Senator Mazurek had questions concerning the rebuttable presumptions under Subsection 2 and the conclusive presumptions contained in Section 1. Senator Mazurek felt that perhaps these provisions should be separated into two separate statutes. Senator Mazurek questioned Mr. Johnson as to whether other states had combined the two offenses into one statute. Mr. Johnson agreed that the chemical and behavioral offenses should be separate and distinct.

Senator Crippen questioned why, if the illegal per se offense is a lessor offense, it carries the same penalty.

Senator Crippen questioned Col. Landon as to whe use of "Ways open to the public" and how the language should be changed to reflect places such as jogging trails and playgrounds.

Senator Daniels asked Mr. Johnson if a person could be charged with two counts, one for drunk driving per se and one for the traditional DUI. He was told yes, you could be charged and convicted on both counts. The Committee felt that you should be charged one way or the other to avoid a "double jeopardy" situation.

There being no further questions from the Committee, Representative Vincent closed the hearing by stating that HB540 is an important piece of legislation which provides for conclusive evidence. Representative Vincent stated that no one is as good a driver even with a .05 blood-alcohol level as they are when they are sober.

CONSIDERATION OF HOUSE BILL 191: Representative Ramirez, sponsor of the bill, stated that HB191 provides for a "division" of property as opposed to a "disposition" of property, for the purposes of tax and other laws. Representative Ramirez stated that several other states have modified their divorce laws to reflect this change. Representative Ramirez stated that HB191 contains no significant fiscal impact on the state.

PROPONENTS: Ms. Stacey Flaherty, representing the Women's Lobbyist Fund, submitted written testimony (see attached Exhibit "G") in support of HB191. Ms. Flaherty testified that HB191 will strengthen the current laws of the state and will eliminate negative tax consequences resulting from transfers of property in divorce proceedings.

There being no further proponents and no opponents, the hearing was opened to questions from the Committee.

Senator Turnage asked Representative Ramirez if it would cause any problems if the Committee replaced the word "common" with "vested" on page 3, line 4. Representative Ramirez stated that he had no problem with this suggestion.

Exhibit "A"
March 23, 1983
HB540

TESTIMONY OF: STEVE JOHNSON
Assistant Attorney General

RE: HOUSE BILL 540

The Attorney General strongly supports HB 540. If enacted, it would increase the certainty and ease of securing DUI convictions, increase the frequency of guilty pleas, and, in the long run, decrease the cost in terms of time and money of DUI prosecution. Those results have been attained in other states which have enacted similar laws.

HB 540 make two significant additions to our existing DUI statues. (1) First, it adds in section 2 a wholly new offense by making it unlawful to drive while having an alcohol concentration of 0.10 or more. "Alcohol concentration"[1/] is a defined term under the bill and refers to the weight in grams of alcohol found in either 100 milliliters of blood or 210 liters of breath or 75.3 milliliters of urine.

1/ This definition of alcohol concentration was developed in the early '70s by the National Safety Council. It was then adopted by the State of Minnesota in its DUI laws and has been incorporated into the model DUI statutes proposed in the 1979 revision to the Uniform Vehicle Code upon which HB 540 was based.

(2) Second, HB 540 makes laboratory reports showing the amount of blood present in a sample of a defendant's blood, breath or urine to be directly admissible into evidence at trial. Currently, the state incurs considerable expense in sending crime lab technicians to DUI trials in every corner of the state to testify on the amount of alcohol that they have determined to be present in a defendant's blood at the time of arrest. Present law declares lab reports to be a form of inadmissible hearsay.[2/] HB 540 makes lab reports admissible into evidence but at the same time sets strict requirements of verification of signatures and certification of laboratories performing chemical analysis in order to assure the authenticity and reliability of those reports. The net effect will be to reduce the travel time of crime lab technicians and let them devote more time to the technical job they were hired to perform.

Section 5 of the bill also requires any defendant to give ten days notice to the prosecuting attorney of an intention to call the lab technician as a witness. If the defendant does not do so, he waives any and all right to call the technician as a witness. The notice

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2/ See Rule 803(8)(i), Montana Rules of Evidence (M.R. Evid.). However, under Rule 802, M.R.Evid., the legislature may enact statutory exceptions to the rules of evidence established by the Montana Supreme Court.

provision allows crime lab personnel to budget their time more effectively and reduces the ability of a defendant to harrass the state by making untimely requests for lab personnel to appear at trial.

The new offense which HB 540 proposes to add to Montana's DUI laws is generally referred to as an illegal per se ("PS) law. This new offense would constructively supplement--not unnecessarily duplicate --our existing DUI statute. The new offense is proposed subsection (1) to section 61-8-401, MCA, under section 2 of HB 540. Traditional DUI is proposed subsection (2) to section 61-8-401. To be guilty of traditional DUI under existing law, more must be shown than the level of alcohol in one's blood while driving: It must be shown that the driver is "intoxicated," i.e., physically or physiologically impaired to an extent that his or her senses and reactions are not functioning reliably. In other words, traditional DUI is a behavior-based offense. Evidence of chemical test results showing alcohol concentration is relevant only if those results can be correlated to physiological impairment. To establish that correlation is the function of the presumptions under section (2) of the bill on pages 3 and 4.

On the other hand, the new IPS offense proposed by the bill is not based on behavior. It is a chemically-based offense. The only elements

constituting the offense are driving and a prohibited alcohol concentration as measured by means of a chemical test of the defendant's blood, breath, or urine. Evidence of behavioral impairment under an IPS statute is unnecessary and irrelevant. Accordingly, the statutory presumptions of intoxication do not apply to an IPS charge.

As of August of 1981, fifteen states had IPS statutes. More have undoubtedly been enacted since that time. They have consistently received strong support in both the lower and the appellate courts when challenged on constitutional grounds. In no case has an IPS statute ever been ruled unconstitutional on any theory.

According to a 1981 survey conducted by the National Highway Traffic Safety Administration (NHTSA), other jurisdictions have reported an increase in the frequency and number of guilty pleas to DUI following enactment of IPS statutes because those statutes are much harder to defend against than traditional DUI. If the chemical test is properly administered and shows a prohibited alcohol concentration, the defendant's only defense consists of attacking the procedural legality of his arrest or the scientific reliability of established chemical testing procedures or devices. Prosecutors have reported speedier resolution of cases and fewer trials as the result of the stronger plea bargaining

position they enjoy under IPS statutes whenever lab reports indicate a high alcohol concentration.

As a final note I would recommend a slight amendment in the presumption language of page 4 of the bill relating to a presumption of intoxication in the case of defendants with an alcohol concentration of 0.10 or greater. Under section 2 of the bill, proposed subsection (4)(c) to section 61-8-401, MCA, reads: "If there was at that time an alcohol concentration of 0.10 or more...it shall be presumed that the...person was under the influence of alcohol."

My suggested amendments are two-fold: first, specify as explained above, that the statutory presumptions under proposed subsection (4)(c) to section 61-8-401, MCA, relate only to charges under proposed subsection (2) to section 61-8-401, MCA, i.e., only to charges of traditional DUI. Second, the language of proposed subsection (4)(c) to section 61-8-401 on page 4 of the bill should explicitly state that the presumption of intoxication there provided for is a rebuttable and not a conclusive presumption. If proposed subsection (4)(c) is interpreted by the courts to be a conclusive presumption which the jury must make, the presumption is of questionable constitutionality. In Sandstrom v. Montana, 442 U.S. 510 (1979), the United States Supreme court held that a statutory presumption that could be read as a conclusive presumption of a material element

of a charged offense was unconstitutional because it "would 'conflict with the overriding presumption of innocence with which the law endows the accused...'" and would relieve the state of proving every fact necessary to constitute the crime beyond a reasonable doubt. Id. 442 U.S. at 523. The presumption of proposed subsection (4)(c) could be ruled unconstitutional under Sandstrom unless it is made clear that presumption is rebuttable by the defendant.

Exhibit "B"
March 23, 1983
HB540

MONTANAN'S AGAINST DRUNK DRIVERS
Missoula County Chapter

I am Ronald Yates, MADD leader for Missoula County. I am taking annual leave today because today you're considering legislation on a subject very dear to my heart--that of the carnage caused by the drunk driver.

Senator Halligan, in our county of Missoula last year, 1982, 12 of our 20 auto fatalities were drinking-related. 300 people were injured in accidents where one of the drivers had a blood alcohol level of 0.05 % or greater, ie. at least half of the present presumptive rate of intoxication of 0.1%

Senator Turnage, in Lake county which you represent, 9 of the 13 auto fatalittes were drinking-related(69 %). 99 people in your county were injured in alcohol-related wrecks.

Senators, these are your constituents. They depend on you to enact laws that say loud and clear--DON'T DRIVE DRUNK IN MONTANA! I realize that politically there is no one single solution to the problem. Education on the effects of alcohol on the driver, changing public attitudes on the acceptability of drinking and driving are crucial. We at MADD are doing our share, as are other groups, yet, at the same time, tough laws and law enforcement are essential to solve the problem. With no single solution, each partial solution become crucial.

HB 540 is a crucial part of the solution. There are several reasons:

1. It would greatly simplify the ease and speed of conviction of a DUI suspect whose blood alcohol content is 0.1% or greater. This is because the prosecution representing you and I would not have to show anything else to get a conviction!

2. Police officers would be more willing to pick up DUI suspects because the likelihood of getting a conviction would be greater. Presently, it's common practice for defense attorneys to delay trials. This allows their client to continue to drive a vehicle. It also serves to dull the memory of the police officer so that he appears less sure of himself when the case goes before a jury trial. (Jury trials are better for the defendant because many jurors feel hypocritical because they have drank and drove themselves.) In the trial the officers native intelligence is often challenged and he is made to look foolish. That is no motivation to pick up drunk drivers

MONTANAN'S AGAINST DRUNK DRIVERS
Missoula County Chapter

3. 0.1% is a widely accepted, even lenient, standard for driving under the influence. The Scandinavian countries use 0.05 %, one-half of our proposed standard blood alcohol level. It has been reported in several studies that a driver at 0.1% blood alcohol level is 7 times more likely to have a traffic accident than a sober individual. Practically speaking, a 210 pound individual of my size would need to drink 6-7 beers or shots of bourbon in an hour to reach this level. Gentlemen, would you drive back to Missoula with me if I had drank that much? Would you let your son or daughter or wife?

4. Provides a uniformity of convictions across the state through the use of fair, impartial, scientifically accepted alcohol testing machines.

5. Allows a police officer, spotting a drunk driver in a parking lot, mall, or other public way, to arrest that individual. He presently can't do so unless he saw the motorist driving on a public road.

6. Plugs loopholes that most citizens are unaware even exist. Most of your constituents would be shocked to learn that a gas chromatograph reading of 0.1% does not result in an automatic conviction, or that a a policeman spotting an obviously intoxicated motorist in the parking lot of a saloon can not arrest that individual.

Please, senators, support HB 540.

Ronald L. Yates

Ronald L. Yates
MADD Leader, Missoula County

Exhibit "C"
March 23, 1983
HB540

THE GARDEN CITY
HUB OF FIVE VALLEYS

Missoula, Montana 59802

March 22, 1983

OFFICE OF CITY ATTORNEY
201 West Spruce Street
Phone 721-4700
83-206

Senate Judiciary Committee Members
State Senate
Capitol Station
Helena, Montana 59620

Re: House Bill 540 - An Act Revising the Laws Prohibiting Driving Under the Influence of Alcohol or Drugs; Making it an Offense for an Individual with a Blood Alcohol Concentration of More than .10 to Drive a Motor Vehicle; Providing for the Admissibility of Evidence.

Dear Senate Judiciary Members:

I would like to express my support for House Bill 540 with a couple of amendments. In order to be eligible for federal monies earmarked for dealing with drunk driving, it is my understanding that federal guidelines require that an offender for the first time within five years who refuses to submit to a chemical test must have his/her driver's license suspended for at least 90 days and a subsequent offender within a five (5) year period must have his/her driver's license suspended for one (1) year. Thus, I would urge your consideration of these amendments at page 7, line 3 of the Bill.

It is my understanding that the suggested provisions with respect to driver's license suspensions are essential to allow the State to be eligible to receive federal funds for obtaining equipment to be used in drunk driving cases and to help educate the public concerning the dangers of drinking and driving. Further, these provisions would also help serve as a deterrent to driving under the influence of alcohol; and if the individual did drive, it would serve as a deterrent to refusing to submit to a chemical test.

I would like to urge your support for an amendment to House Bill 540 that would in the interests of public safety extend the geographical applicability of laws prohibiting the operation or physical control of motor vehicles while under the influence of alcohol to include all geographical areas of this state in addition to "highways of this state" (Section 61-8-401(1)(a), M.C.A.). I would urge reinstatement of the originally proposed language for this Bill which was "anywhere within" the state. The present Bill language "ways of the state open to the public" is still restrictive. Areas where the public would not be protected by the ability to file a D.U.I. charge pursuant to the

existing language would include parks, boulevards, school campus yards (including grade and high schools as well as college), railroad rights-of-way, private yards, undeveloped private property (fields), etc. When I commenced prosecuting D.U.I. cases for the City of Missoula in June, 1975, the Revised Codes of Montana allowed the prosecution of all D.U.I. offenders who were anywhere in the state. However, in 1979, during recodification of State laws to the Montana Code Annotated, it is my understanding that a very lengthy legislative bill labeled as a style change bill altered codified D.U.I. statutory language to the effect that it eliminated a prosecutor's ability to prosecute driving under the influence of alcohol offenders anywhere in the state and limited the prosecutorial power to the "highways of this state." HB 540 is a step in the right direction for the reason it will again allow the prosecution of offenders in parking lots and service stations, etc. but it does not go far enough to protect public safety and property. Ironically, a prosecutor may still prosecute anyone who operates or is in physical control of a motor vehicle while he/she is under the influence of a narcotic drug or any other drug anywhere they are found "within this state". The person under the influence of alcohol may be just as dangerous as the person under the influence of drugs.

I know from legal research I performed while State law allowed the prosecution of D.U.I. offenses anywhere in the state that many states allow prosecution of D.U.I. offenders no matter where they are located within the respective state. They use such statutory language as "anywhere in the state" or "upon the highways and elsewhere throughout the state". A person who is operating or in physical control of a motor vehicle while under the influence of either alcohol or drugs is a serious threat or danger to persons and property whether the D.U.I. offender is on a highway or located anywhere in the state. Individuals exposed to the dangers of the individual under the influence of alcohol who operates or is in physical control of a motor vehicle while under the influence of alcohol have the right to be protected as a matter of public safety from those D.U.I. offenders no matter where they are operating vehicles within this state.

House Bill 540 would also save the State Department of Justice staff time and travel expenses for the reason that it allows the admissibility of a Department of Justice laboratory analysis of blood, breath, or urine without the requirement of the necessity of the person(s) performing the test or preparing the report being there, unless the accused or his/her attorney notifies the prosecuting attorney at least 10 days before the trial of his/her desire to call the person(s).

Therefore, I would urge your support for HB 540 with your favorable consideration of the suggested amendments.

Yours truly,

Jim Nugent

Jim Nugent
City Attorney

JN/jd

STATE JUDICIARY COMMITTEE 3-23-83

Exhibit "D"
March 23, 1983
HB540

It's time to say it out loud--Drinking and driving is against the law!! Driving drunk should be a criminal offense. We have all seen road tests and alcohol studies enough to prove the fact that: NOBODY CAN DRIVE SAFELY WHEN THE BA is .1. Nobody has the coordination and ability for quick response, whi driving requires, when the BA is .1. You can't learn how, get used to being.1 or grow older and get smart enough to drive safely when the BA is .1. This is a chemical problem involving body functions. It is a physiological effect which has nothing to do with basic intelligence, physical fitness nor performance. Therefore, it is time that we accept scientific facts and make it as easy as possible for the people to understand that: It is against the law. It is dangerous, stupid, expensive, irresponsible, deadly, painful! It is against the LA The public is losing the war against drunk drivers. Why play games with this problem. We have researched it, dissected it, philosophied about it and now it is time to use all of these statistics, studies, graphs which our behavioral and physiological research people have compiled and "Call a Spade a Spade!"

Sure, we may have all done it--are still doing it--or we have friends and family who participate in this sport--but we are all able to listen and learn. There were people who thought that the earth was flat until it was proven otherwise. After this happened, the people who were still going around pretending that the earth was flat, looked a little silly! Now, there is a lot of work to do to educate the public that their behavior must change. We can do that in two ways: Preventive Education programs which cost $ and confronting the problem which costs your vote! but here you have both. If our proposed legislation passes, our state will qualify for $200,000 in Federal money for education and prevention programs in Montana. I am here to tell you that you can make a lot of pamphlets, filmstrips, billboards and educational projects with $200,000 because we have been doing it. This is a small state and we can reach our population with $200,000. Our MADD group has been fun/ctioning like Sam Levinson stated: "We have everything but money". In the last four years, the interest in this subject has grown. There are more people in this state with the training to use that $ towards a big statemer to the people. Look what technology and scientific facts have done to the acceptanc of smoking! Just light up in front of any child and then get ready to listen to a little confrontation regarding your health and his. Our kids need alcohol educational programs so that they can grow up and then deal with this social habit with responsibility.

Your responsibility here as legislators is to confront the problem by taking a strong stand here. Get our law enforcement officers out of the courtroom and back on the street--or working his night shift instead of waiting outside of the courtroom all day for his turn to be put on trial. This is the most rediculous waste of man power and tax money to be paying our policemen to testify regarding the performance of a traffic offender.

The courts can argue with the stupid cop, the jury can have feelings about the "bad guy" patrolman but who can argue with the Gasgomatograph? It is not okay to drink and drive in the state of Montana anymore'!!SAY IT OUT LOUD!!!

KEN LARGIN
M.A.D.D.

Exhibit "E"
March 23, 1983
HB540

MISSOULA CITY-COUNTY
HEALTH DEPARTMENT
301 West Alder · Missoula, Montana 59802 · Ph. (406) 721-5700

TESTIMONY HB540

I am Michael Wood, M.S., M.P.H., Director of Health Education for the Missoula City-County Health Department. I represent a 30 member task force in Missoula concerned about drunk driving. We strongly support HB540.

You have already heard of the nature and scope of the drunk driving problem in Montana and the country, so I will not address those facts and figures. What I would like to do is explain why, from a public health perspective, HB540 is an important and rational piece of legislation.

HB540 would make it unlawful and punishable to drive in Montana with a blood alcohol concentration (BAC) of 0.10% or greater. What does 0.10% BAC really mean?

1) 0.10% is one one-thousandth of your total blood volume being alcohol. That is, for every 1,000 cc's of blood, there is one cc of ethanol alcohol.

2) In order to get one cc of alcohol per 1,000 cc's of blood, one must drink rapidly and heavily. For example, one of the honorable senators at this hearing today weighing 200 lbs would need to drink six beers within the next hour to get to .10%. Six 12 oz. beers. That is one beer every ten minutes, hardly social sipping. To get to .10, you need to drink fast and hard.

3) 0.10% BAC has long been established as the point at which no one can safely drive, no matter how much one thinks he/she can "hold his liquor." This has been time tested and is strongly backed by the scientific and medical communities. The America Medical Association states "... as they reach that point (0.10% BAC) or exceed it, the degree of intoxication is such that the driving skills of everyone are dangerously altered." (Source: Manual on Alcoholism, AMA, Fall, 1967)

4) State-of-the-art BAC tests, contrary to some rumors denying it, have been shown to be both reliable and accurate. If you have questions about this, I would recommend that you direct them to someone from the Department of Highway Safety, some of whom are at the hearing today.

These facts strongly argue this simple fact: 0.10% BAC is measurable and dangerous. There is no doubt about it.

Second, I would like to give some of the rationale for the proposal that driving with a 0.10% BAC be illegal per se and punishable. To start with, driving is not a right guaranteed by the Montana Constitution. Driving is simply a privilege, which is given and taken away as appropriate. Driving without a license is itself illegal per se, and punishable with a minimum of two days and a maximum of six months in jail and up to a $500 fine. Isn't it logical, then, that driving with a 0.10% BAC, a much more dangerous situation than driving without a license, also be illegal? After all, it is illegal for a blind or "incompetent" person to operate a motor vehicle. To categorically state, as HB540 does, that it is unlawful

to operate a motor vehicle with a 0.10% BAC makes good sense. Remember, driving is a privilege. If the privilege is abused, the driver should be punished.

Last, I would like to point out what HB540 would and would not do. HB540 will send a message to the public: if you are .10 driving and get caught, you will very likely be convicted; HB540 will increase the number of guilty pleas and subsequent convictions; HB540 will get more drunks off the road and into treatment; HB540 will, in the long run, reduce the carnage on Montana highways. HB540 will not deny persons due process; and HB540 will not get the unlucky social drinker (remember that the average BAC in Montana fatalities is .15% and .18% average for arrests).

HB540 is also a critical part of the DUI legislative package before the legislature. In order for SB313 and SB250 to be effective, HB540 must be passed, and vice versa, in order for HB540 to be effective, SB313 must pass along with the already passed SB250. The combination of these bills will greatly strengthen DUI laws in Montana and help with the long term solution of the problem. The additional incentive to passing these bills is, of course, a large federal grant program to educate the public about these laws and how to prevent drunk driving.

You will be taking a giant step forward for the people of Montana if you pass HB540. We thank the committee for its support on the other DUI bills, and urge you to finish the job by supporting this one.

Thank you.

MISSOULA COUNTY
OFFICE OF THE ATTORNEY
MISSOULA COUNTY COURTHOUSE
MISSOULA, MONTANA 59802
TELEPHONE: (406) 721-5700

ROBERT L. DESCHAMPS III
COUNTY ATTORNEY

Exhibit "F"
March 23, 19 3
HB540

Betty Wing
Deputy County Attorney
MISSOULA COUNTY

Proponent of House Bill 540

House Bill 540 makes it an offense for a person to drive a motor vehicle while the alcohol concentration in his blood, breath or urine is .10 or more.

The .10 alcohol concentration level has been well accepted by the states as the level at which driving is significantly impaired in all people. Based upon scientific studies and accepted medical knowledge, the American Medical Association recommended the .10 figure as the level rendering a person too intoxicated to drive. The AMA found that as the alcohol concentration reaches or exceeds .10, the degree of intoxication is such that the driving skills is dangerously altered.

The Montana DUI law is governed by the Cline doctrine from the Montana Supreme Court case of State v. Cline, 135 Mt. 372, 339 P.2d 657 (1959). Under the Supreme Court ruling, the law in Montana is as follows:

> "The expression 'under the influence of intoxicating liquor' covers not only all the well-known and easily recognized conditions and degrees of intoxication but any abnormal mental or physical condition which is the result of indulging into any degree of intoxicating liquors and which tends to deprive him of that clearness of intellect and control of himself which he would otherwise possess. If the ability of the driver of an automobile has been lessened in the slightest degree by the use

of intoxicating liquors, then the driver is deemed to be under the influence of intoxicating liquor. The mere fact that a driver has taken a drink does not place him under the ban of the statute unless such drink has some influence upon him, lessening in some degree his ability to handle said automobile."

I would like to emphasize that the law requires only that driving ability be "lessened in the slightest degree." We are accustomed to talking about drunk drivers but a driver does not have to be drunk to be guilty of DUI. He only has to be sufficiently under the influence to affect his judgment and driving ability. The AMA has found that at .10 any person has reached that level.

House Bill 540, therefore, is consistent with Montana law in prohibiting driving with a .10 alcohol concentration.

Similar statutes have been passed in other states and have been upheld by state courts. Oregon's statute was upheld in 1979 in State v. Clark, 286 Or. 33, 593 P.2d 123 (1979). Utah's statute was held constitutional in Greaves v. State, 528 P.2d 805 (1974).

All of us want to prevent the death and injury which drinking and driving cause. This bill will aid in that effort.

I would like to add my support for the portions of the bill allowing alcohol concentration reports into evidence and requiring advance notice for calling lab personnel as witnesses. The Montana Crime Lab has an impossible burden in doing the analysis for DUI's and traveling throughout the state testifying at DUI trials. Any effort to lighten that burden is desirable.

Please support House Bill 540.

FURTHER CONSIDERATION OF HOUSE BILL 565: Senator Daniels had questions as to who decides what is legible and what is illegible. The Committee decided that HB565 should be amended to provide that the Clerks and Recorders must attach a note to the recorded document stating that this document is illegible and the only copy available.

ACTION ON HOUSE BILL 565: Senator Crippen moved that HB362 BE RECONSIDERED. This motion carried unanimously. Senator Shaw moved that the proposed amendments BE ADOPTED. This motion carried unanimously. Senator Mazurek moved that HB362 BE CONCURRED IN AS AMENDED. This motion carried with Senators Daniels and Shaw voting in opposition.

FURTHER CONSIDERATION OF HOUSE BILL 191: Senator Turnage questioned the tax implications of HB191. He questioned the use of the word "common." Senator Mazurek did not like the use of the word "disposition."

ACTION ON HOUSE BILL 191: Senator Daniels moved that HB191 BE TABLED. This motion carried unanimously.

ACTION ON HOUSE BILL 856: Senator Mazurek moved that the proposed amendment to HB856 BE ADOPTED. This motion carried unanimously. Senator Berg moved that HB856 BE CONCURRED IN AS AMENDED. This motion carried unanimously.

ACTION ON HOUSE BILL 880: Senator Mazurek moved that a severability clause to HB880 BE ADOPTED. This motion carried unanimously. Senator Berg moved that HB880 BE CONCURRED IN AS AMENDED. This motion carried unanimously.

ACTION ON HOUSE BILL 357: Proposed amendments to HB357 were submitted to the Committee, and Senator Mazurek moved that these amendments BE ADOPTED. This motion carried unanimously. Senator Mazurek then moved that HB357 BE CONCURRED IN AS AMENDED. This motion carried unanimously.

ACTION ON HOUSE BILL 540: Senator Shaw moved that HB540 BE TABLED. This motion failed. Senator Berg moved that the proposed amendments to HB540 BE ADOPTED. This motion carried with Senator Daniels voting in opposition. Senator Mazurek moved that HB540 BE CONCURRED IN AS AMENDED. This motion carried with Senators Galt, Shaw and Daniels voting in opposition.

ACTION ON HOUSE BILL 677: Senator Daniels moved that HB677 BE CONCURRED IN. This motion failed. Senator Daniels moved that

STANDING COMMITTEE REPORT

March 25, 19 83

MR. President

We, your committee on Senate Judiciary

having had under consideration House Bill No. 540

Vincent (Halligan)

Respectfully report as follows: That House Bill No. 540

be amended as follows:

1. Page 2, lines 19 through 25 and page 3, line 1.
Strike: Page 2, lines 19 through 25 and page 3, line 1.
Insert: "NEW SECTION. Section 2. Operation of motor vehicle with alcohol concentration of 0.10 or more. It is unlawful and punishable as provided in 61-8-714 for any person to drive or be in actual physical control of a motor vehicle upon the ways of the state open to the public while the alcohol concentration in his blood, breath, or urine is 0.10 or more.

2. Page 3, lines 2 through 14.
Strike: page 3, lines 2 through 14.
Insert: "Section 3. Section 61-8-401 is amended to read:
"61-8-401. Persons under the influence of alcohol or drugs.
(1) It is unlawful and punishabable as provided in 61-8-714(1) for any person who is under the influence of:
(a) alcohol to drive to be in actual physical control of a motor vehicle upon the ~~highways of this state~~ ways of the state open to the public;

~~DO PASS~~

Continued on page 2

JEAN A. TURNAGE Chairman.

STATE PUB. CO.
Helena, Mont.

March 25, 1983

(b) a narcotic drug to drive or be in actual physical control of a motor vehicle within this state; or

(c) any other drug to a degree which renders him incapable of safely driving a motor vehicle to drive or be in actual physical control of a motor vehicle within this state; or"

3. Page 3, line 15.
Strike: "(c)"
Insert: "(d)"

4. Page 3, line 16.
Following: "vehicle"
Insert: "to drive or be in actual physical control of a motor vehicle within this state"

5. Page 3, line 17.
Strike: "(3)"
Insert: "(2)"

6. Page 3, line 18.
Strike: "or (2)"

7. Page 3, line 21.
Strike: "or (2)"

8. Page 3, line 22.
Strike: "(4)"
Insert: "(3)"

9. Page 4, line 24.
Strike: "(5)"
Insert: "(4)"
Following: "subsection"
Strike: "(4)"
Insert: "(3)"

10. Page 5, lines 6 through 12.
Strike: subsections 6 and 7
Renumber: subsequent subsection

11. Page 5, line 15.
Strike: "(6)"
Insert: "(4)"

12. Page 5, line 16.
Strike: "subsections" and "and (2)"
Insert: "subsection" before "(1)"

13. Page 5, following line 19.
Insert: "NEW SECTION. Section 4. Definition of alcohol concentration. For purposes of [Sections 2 and 3], 'alcohol concentration' means either grams of alcohol per 100 milliliters of blood, grams of alcohol per 210 liters of breath, or grams of alcohol per 75.3 milliliters of urine."

Con't p. 3

Chairman.

JEAN A. TURNAGE

STATE PUB. CO.
Helena, Mont.

14. Page 8, lines 12 through 14.
Following: "person" in line 12
Strike: "while driving or in actual physical control of a motor vehicle while under the influence of alcohol,"
Insert: "in violation of [Section 2 or Section 3 of this Act]."

And, as so amended,
BE CONCURRED IN

JEAN A. TURNAGE
Chairman.

STATE PUB. CO.
Helena, Mont.